

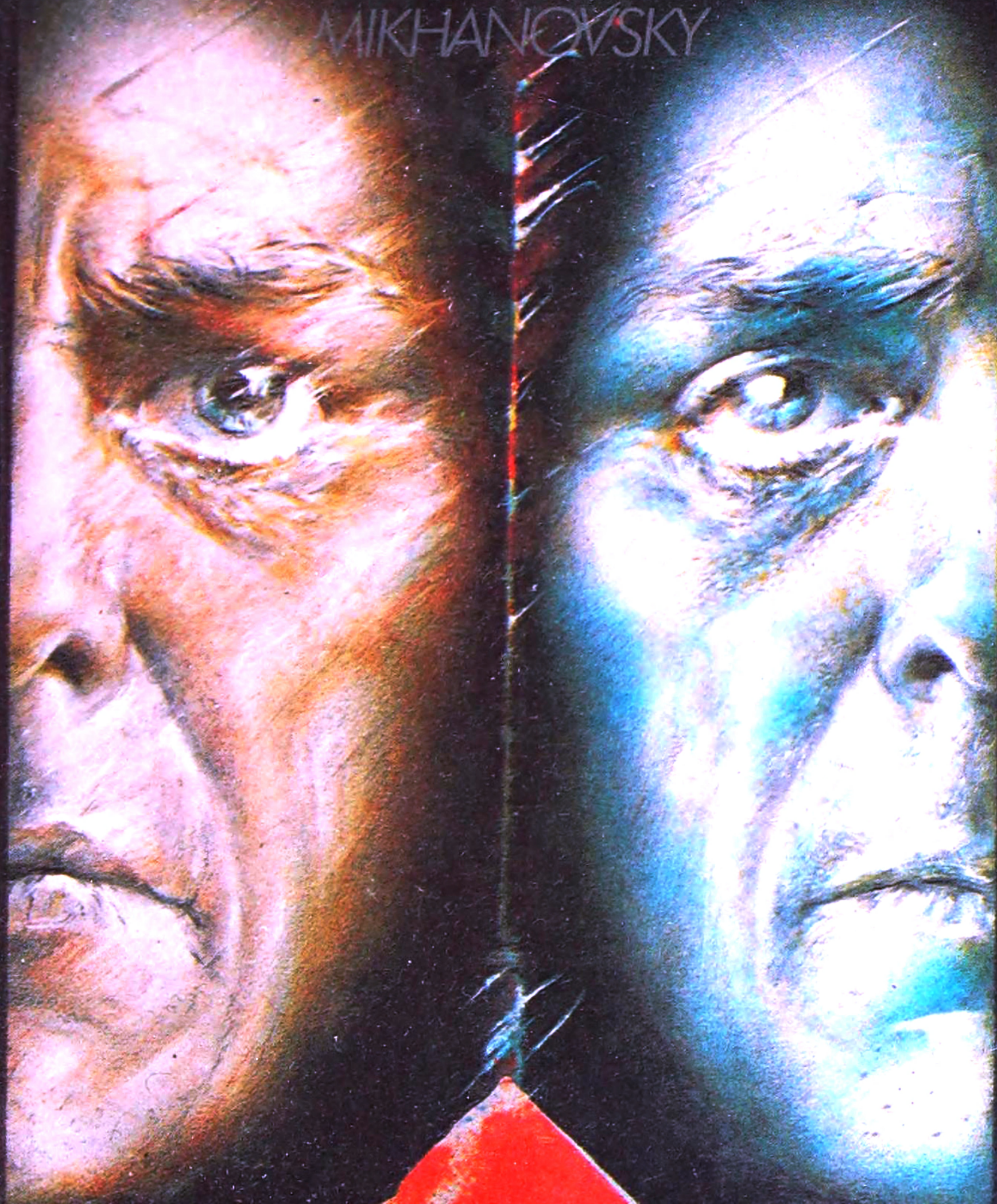
Raduga

ADVENTURE & FANTASY



The Doubles

Vladimir
MIKHANOVSKY





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THE DOUBLES



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CONTENTS



CONTENTS

The Doubles. <i>Translated by Raissa Bobrova</i>	7
The Land of Inforia. <i>Translated by Miriam Katz</i>	157
Ends and Means. <i>Translated by Katherine Judelson</i>	177
The Violet. <i>Translated by Katherine Judelson</i>	355

THE DOUBLES



THE DOUBLES



Linda Lawn recalled her childhood spent in the Newmores' house as a long oppressive dream. Once over, such a dream leaves a lasting heaviness at heart, even though its sad events may have been interspersed with joyful ones. Is this alternation of grief and joy perhaps the most attractive thing about dreams?

As a matter of fact, Newmore's mother treated her quite decently. The father, too, on his rare visits from interplanetary trips made no distinction between her and his own son.

Nevertheless, her childhood years left a lasting scar on her heart, which never healed properly. The scar was the doing of Newmore Junior, called Newm for short.

As soon as the girl came to live in the Newmores' splendid house after both her parents were killed in an air crash, the boy became her evil genius. She often cried secretly on his account, although he never pulled her thin red pigtails and physically maltreated her. But he engineered things in such a way that whatever mischief was done in the house—the breaking of a Saxon china cup, the plucking of a rose in the flower bed, the pouring of water into a visitor's hat in the hall—was always and inevitably Linda's fault.

Take that ill-starred Saxon cup, for example. The many years which had passed since had not dimmed the recollection of the painful episode in Linda's memory.

...They had been playing in the garden, then went in and Newm began showing her the jig as danced by the sailors. He did the dance quite well.

“Now you try it,” he said, and taking Linda by the hand, led her into the middle of the room.

At first the steps seemed too difficult.

“Hop, hop higher!” Newm shouted, carried away by the role of a dancing master, as he was always carried away by whatever he undertook to do. “Clap your hands now, and jump to the left!”

And when she jumped, he gave her a push and she fell down, striking the stand on which the cup had been.

The clatter brought Newm’s mother in. She stood silent for a while, taking in the tableau.

Linda and Newm stood side by side, looking guiltily down.

“Fighting again?” the mother finally said.

The boy shook his head.

Then she looked at Linda.

“Have you done it?”

“Yes,” Linda whispered.

Newm’s mother looked regretfully at the chips of china.

“This cup was four hundred years old,” she said with a sigh. “How did it happen?”

“I was dancing... Or rather I was learning to dance a jig ... and the floor is slippery...” Linda started to explain and then trailed off, sensing the futility of her words.

The woman shook her head.

“Linda is saying the truth, the floor is as slippery as a skating rink,” Newm suddenly came to her rescue. To demonstrate his words,

he took a run and slid down the length of the room.

“A difficult child,” the woman said. It was not clear who she was referring to.

Newm stood by the window staring out as though it was not really any concern of his.

Finally, after delivering several apt words of reprimand, Newm’s mother went out to order Rob to sweep off the shards.

When the door closed behind her, Linda heaved a sigh of relief. Newmore was now looking at her. She glanced at his sly eyes and his lips ready at any moment to spread in a mischievous grin. He ruffled up his unruly hair and let drop:

“Why did you have to stand up for me? I don’t want your protection.”

“What do you want, Newm?” Linda asked quietly.

“I want you always to say the truth, Ginger. I can’t be friends with a girl who tells lies.”

Linda stepped up to him and turned away hiding her moist eyes. She wanted his friendship more than anything in the world. But what had she done to displease him? She had shielded him.

Newm walked up to her and looked her in the eyes.

“Cowardly thing,” he drawled.

“Oh no,” she said starting as though from a whip blow.

“Why didn’t you tell Mummy the truth then?”

“What should I’ve said?”

“That I pushed you.”

“I thought you didn’t mean to.”

“Oh, so you thought I didn’t mean it!” Newm mocked her. “But I did! I did mean it, I did, I did!” And he hopped on one foot, shedding all his affected seriousness.

“It’s not true!”

“Yes, it is.”

“Why did you do it then?”

“I felt like doing it, that’s why! What are you going to do about it? Go and complain to Mother? Or d’you want to be punished?”

She shrugged her shoulders.

“I’m not afraid of punishment.”

“You’re a cowardly thing all the same! You were afraid to tell Mother the truth!”

The door was opened at this moment and a stately robot marched in. For his height and stature he was nicknamed Monument.

Linda knew that only a very well-to-do family could afford a robot servant. In her own home there had not been any robots even though her father had a well-paid job at a computer centre.

In her new home Linda soon got used to these man-like machines, which had a kindly disposition and, despite their apparent clumsiness, were very efficient servants. This was also true of Rob, nicknamed Monument, who had somehow earned himself a hearty dislike of Newmore Junior.

Rob nodded to the children, then lowered himself on his knees and began to collect the chips.

“Do you remember the deluge, Rob?” Newm asked.

“The deluge?” the robot asked and his claw-like hands stood still in mid-air. Questions that went outside the scope of household command always affected the robot in this way, as the boy knew only too well.

“Yes, the flood, when Noah was,” he repeated with an innocent mien.

The robot searched his memory.

“I don’t remember,” he finally admitted after a long pause.

“That’s strange, you should remember it.”

“Why should I?” Monument inquired anxiously.

“Because you’re antediluvian!” Newmore said laughingly and slapped the robot on the broad shoulder as the machine stood on its knees.

“Leave him be, Newm,” Linda said.

Realising that the boy was making fun of him, as was his wont, the robot went on with the job in hand.

It was, indeed, a very old design, but the elder Newmore was firmly against replacing old robots with new models which were modified every so often to tempt rich customers.

Newm’s mother had long been complaining about their mechanised servants, who had become so antiquated and unreliable that she was ashamed before visitors.

“Please understand, dear,” her husband invariably answered her, “I am away from home so much, and every time I come back from a space trip I yearn to find things at

home unchanged—as far as possible in the face of ruthless time, of course, while out there I think of you, Newm and Linda and imagine you the way I last saw you on Earth. I don't want things to change in our nest, I want them to remain the same, down to the last flower in the garden or nail in the wall."

"But what has this to do with Rob?"

"Rob is a part of our household, almost one of the family. He was my nanny when I was little. How can I relegate him to the scrap heap?"

"Very well," his wife would say with a sigh and let the matter be.

Linda and Newm remained silent until Monument was done with picking up the shards and left the room. The robot worked slowly, freezing in some absurd pose every now and again, yet he did his work conscientiously, there was no denying that.

Having done with the broken cup remains, Rob rose, swept his element-eyes about the room and made for a corner of the room. Newm planted himself in his way, but the robot got round him, picked up the last shard in the corner, where the boy had kicked it and waddled towards the door.

"Congratulations, Ginger," Newm pronounced solemnly after the door was closed behind the robot. "You have stood the test."

"What test was that?" Linda asked warily, expecting another trick on Newm's part.

"A test for loyalty!"

"You and your tests," Linda said mock-

ingly, but she was secretly pleased.

Newm took her hand. Linda suddenly blushed to the roots of her hair.

“You know, blushing suits red-headed people,” Newmore remarked abstractedly.

Linda pulled her hand free and ran out of the room...

It happened during Newmore Senior's last visit.

The house was brimming with joy, and even its old walls seemed to have grown brighter.

There were presents for everybody.

The mother got a remarkable gown which retained the same temperature in any kind of weather. Linda got a box of sweets from a distant planet: they had an elusive bitterish taste reminiscent of almonds, which she remembered to this day.

But the most amazing present was Newm's. It was not quite a toy, and not quite a gadget: an amazing “all-seeing eye” which, as the father explained, could see through opaque surfaces. It had the shape and size of an ordinary football. Its surface was fleecy and it vibrated rhythmically.

“It seems to be breathing,” Linda whispered, her glance glued to the ball.

“Is it alive, Dad?” Newm asked in a business-like manner, holding the present in his hand nonchalantly.

There followed a long and explicit discourse, from which Linda understood exactly nothing. She only remembered the words “faceted element”. Newm, on the other hand, got it

all, and after extracting all the information he needed from his father, took the “living eye” to his room.

Some time later...

Some time later Linda had an experience which she hated to remember even now, eleven years later, a woman of twenty-five.

That whole day was full of waiting for something out of the ordinary. And although nobody could have known that Newmore Senior would not come back, an imprint of sorrow was felt on everything. Could it be that Linda felt this way only because so many years have passed?

They had a dinner party in the large drawing-room that night. The slow-moving Rob served the father’s favourite dish, roasted shark’s liver. Newm swallowed large chunks in his hurry to get back to his present, avoiding his mother’s disapproving glances. As soon as dinner was over, Newm grasped Linda’s hand and whispered in her ear:

“Come along. I’ll show you something super.”

As she closed the door carefully behind her Linda heard the captain’s opening phrase: “Can you imagine it, my cyber-navigator has learnt to compose music during our last trip...”

Newm led the girl, still holding her hand, to his room.

She stopped in the doorway, enchanted by the sight that struck her eye. Newm had not switched on the light, and from the corner by the window, where Newm had his desk forever heaped with textbooks on physics and mathematics and sheets of paper scribbled all over (he hated notebooks), flowed a blue glow, an even,

soothing brilliance.

The girl drew closer.

The ball was emitting a strong light, but it did not hurt the eyes. Each little hair was a tiny rainbow, trembling and playing all possible colours.

“May I touch it?”

“Go ahead.”

“Oh, it feels like stroking a cat!”

“A cat indeed!” Newm cried superciliously. “It is a very complicated apparatus made of bioelements. I’ll take it apart and then build another exactly like it.”

“What would you want it for?”

“It’s worth a great deal of money. It is a combination of many terrestrial devices—the ‘living eye’, the X-ray apparatus, and so on.”

“Can it really see through you?”

“Don’t you believe it, Ginger? I’ll show you,” said Newm with an enigmatic smile.

He pressed some spot on the shining sphere—the ball began speaking!

The girl started and her skin crawled.

The ball was speaking about her, Linda.

It had a strange expressionless voice, a bit like Rob’s.

Linda remembered to this day every word the “all-seeing eye” said about her. And it all sounded so absurd and offensive that she finally cried out in indignation: “Shut up!”

The ball fell silent.

Tears burst out of Linda’s eyes. She struck out at Newm, but he dodged her laughing. She wiped her tears and walked out into the corridor. In a moment Newm caught up with

her. When they entered the drawing-room, the entire gathering was listening with wrapt attention to the story told by Newmore Senior.

The ball ended its existence the very next day as the result of Newm's attempt to take it apart in order to find out how it worked, something children are wont to do with toys.

Several days later misfortune struck: they learned that the astronaut Newmore had perished. In the years that followed Newm became more and more preoccupied with physics and oblivious to other things. He was unaware that Linda was in love with him, and his indifference was a source of much pain to her.

Linda sought and found justifications for him: of course, he had more important things on his mind. He was a really brilliant young man, he had mastered a course of higher mathematics all by himself, he cracked differential equations like so many nuts. Had not he told her the other day about the imperfections of human nature? It had too much of the animal in it. He, Newmore, was planning to attempt no more no less than changing man's nature. Of course he had no time for a mere girl.

"There are good and bad traits in every man, don't you agree?" he harangued. "There are no absolute villains, there is something good in everybody. You find all-black scoundrels only in novels. It is the same with good people—each is bound to have a failing. I'm wondering if it's possible to separate the good from the bad in a person. You remove the bad traits, as you remove a bad tooth, and

what remains is really excellent..."

"How can you do it?" Linda asked.

Newmore shrugged.

"I have an idea, but it's not very clear yet."

"What idea?" Linda asked to keep him talking to her.

Newmore began talking animatedly about the cerebral hemispheres, chromosomes, particles and anti-particles, until Linda's head reeled.

Finally Newmore became aware that she was not taking his explanations in, stopped and said with a smile: "You know, Ginger, your head must be like Wilson cloud chamber at the moment."

"What's that?" Linda asked in dismay.

"It's a chamber the physicists use to study micro-particles."

"And what have I got to do with it?"

"Well, how shall I put it to make it clear to you... When they switch Wilson cloud chamber on it fills with a kind of fog," Newmore explained mockingly.

Linda did not take offence. She was sure he did not want to offend her. She was in love with Newmore, though she hardly dared to admit it to herself. And what about Newmore? Did he love her? Intuition told her that he was not wholly as indifferent as he seemed, but he was preoccupied with physics, biology, mathematics and never gave her an inkling of a hope. Besides, he knew droves of girls who were prepared to enthuse about a new luminary arising on the scientific horizon.

Beauty was not enough as far as a girl's prospects were concerned, Linda realised.

The world of the rich was not for her, and so she decided to leave the Newmores' home and strike out on her own.

She was lucky in that she found a decent job almost at once—as a salesgirl in a big department store AFA—"All for All".

Several years passed. Newmore became a prominent scientist. He was still absorbed in the same problem of improving man's nature. The experiments, he told Linda during one of their rare meetings, were terribly costly and he was sinking all his money in them. Linda timidly offered all of her modest savings if they could be of any help. When she mentioned the figure, Newmore laughed.

They had met by chance in a cafe. Linda had dropped in to catch a sandwich after work.

"Have you finished work?" Newmore asked.

"Yes."

"Then let's go and take in a film instead of grappling with finances," he offered.

Linda doubtfully agreed.

On the way to the nearest stereo-cinema she wondered at Newmore's inconsistency. Most of the time he was so busy he could not spare a minute, and here he was prepared to waste all of an hour-and-a-half to see the antics of some silly comedian or a stupid love story.

When they found their seats in the spherical auditorium, Newmore took Linda's hand.

As she stared listlessly at the screen, Linda was marvelling at herself. Some time ago she would have thought it the height of bliss to sit beside Newmore in a dark hall and have him hold her hand. But now she felt nothing.

How things change! Their roads had parted. Newmore had his own life. And she had Arben.

When they left the stereo, it was getting dark.

"I haven't seen you for ages, Ginger," said Newmore.

"Well, four months isn't ages," Linda corrected him. And Newmore had changed in those four months, she noted. He looked pale and tired.

"He's working himself to death," she thought.

"How did you like the film?" she asked.

"Not bad," he answered absent-mindedly.

"You never smiled once."

"I'm feeling rather desolate, Linda. Mother is dead."

"Oh no! When did it happen?"

"Soon after we last saw each other. She pined for Dad terribly and the grief drove her into her grave. If I could rid her of the heartache and the memories she could have lived a long time yet."

"Is it possible to rid a person of memories?"

"I think so. Such an experiment is soon going to be staged."

They walked aimlessly, talking about childhood, Newmore's father.

"You shouldn't refuse my savings, Newm," Linda said. "I have no use for them. I am young and healthy, and my pay is good."

"Thank you, Ginger, but I don't really need them. I am receiving an inheritance—two and a half million."

"Two and a half million?" Linda repeated. The sum sounded fantastic to her. How many

lives must she live to save so much? A hundred? She was not good at figures.

On Newmore's suggestion they went into a cafe.

"And what are you going to do with your inheritance?" Linda asked while they were eating their ice cream.

"Oh, I'll find a use for it... Why, have you a suggestion?"

Linda nodded.

"Let's hear it!" Newmore said excitedly. "I am quite curious."

"In the first place, you can stop working. It wears you out terribly."

"An interesting idea." Newmore frowned as though considering the idea in all seriousness. "And what am I going to live on?"

"On the percentage of the capital."

"Indeed! The possibility has completely slipped my mind."

"You will have lots of free time. It's so lovely to have free time."

"And what am I going to do with it?"

"You can think of something really smashing."

"Such as?"

"You might get married."

Newmore looked at her closely and smiled.

"We won't make a go of it," he said. "Two more dissimilar people could not be found. You must admit that we would make the drollest of couples."

"Of course you are right. It would be a droll sight. But I never meant to offer myself for you to marry."

“Who then?”

“Oh, aren’t there enough girls in the world?”

Newmore dropped some small change on the table.

“I am betrothed,” he said.

“Are you? Why didn’t you tell me before?”

“I thought you knew.”

“How should I know?”

“Yes, I have promised myself forever, as the poets say, like that Arben of yours.”

“Arben is not a poet, he is an improviser.”

“Makes no difference,” Newmore said with a shrug. “As long as he does his work well. How are things with him at the Western? That’s where he works, isn’t it?”

“Things are in a bad way,” Linda said with a sigh. “I am at my wits’ end. If it goes on like this much longer they may very well fire him. You know what the Western is like, they don’t stand for any nonsense.”

“Have things come to such a pass?”

“Yes, I’m afraid they have.”

“But what’s wrong?”

“His health is no good. His nerves have gone to pieces. He quarrels with everybody.”

“This is the disease of the age. Mankind should erect a monument of pure gold to the man who saves it from shattered nerves.”

“Well, it seems Arben has got the disease of the age in its worst form.”

“But what are the symptoms?” Newmore asked. It was quite unlike him to show an interest in other people’s affairs.

“He is tormented by nightmares, or dreams, or visions, or I don’t know what,” Linda said.

“And one is not much of a worker after a sleepless night. Things just drop out of his hands. And this goes on day in day out.”

Newmore drummed on the table with his fingers.

“Hm, very interesting. Has he told you all this himself?”

Instead of an answer Linda produced a dog-eared notebook out of her handbag, leafed through it and, opening on a page, offered it to Newmore.

“What’s this?” he asked wonderingly looking at a page written up with scrawled lines sloping downwards relentlessly, although, judging by the neat capital letters at the beginning of each line, the writer was making a special effort.

Newmore had a picture of a man writing laboriously, his head bent sideways.

“Read it,” Linda said.

“Aloud?”

“Yes, but not too loud,” Linda pleaded, casting a glance about the cafe. The few clients seemed to be preoccupied with their own concerns and paying no attention to the couple.

Newmore shrugged, raised the notebook to his eyes—he was slightly myopic but refrained from wearing contact lenses—and read out:

*His life was no bed of roses,
Exposed to the northern winds
He walked a tedious road
And listened to pealing bells.
And his dreams were so weird and scary
That every time he awoke*

*He was thankful to have escaped
The torment of his mind's hell.*

“Have you started writing verse?” Newmore asked in surprise. “Fancy, I would never imagine it possible.”

“These are Arben’s verses.”

“Improvisation?”

“That’s right.”

“And who is he writing about? Himself?”

“Yes... Look here, Newm, you’ve got to help him,” Linda asked as she put the notebook back into her bag.

Newmore looked thoughtful.

“You have connections among scientists, you must have friends in the medical profession as well. The only doctor I know is a failure who never got his diploma... What can he do?” Linda wailed.

“Judging by what you’ve been telling me, he is pretty far gone. ‘And his dreams were so weird and scary that every time he awoke he was thankful to have escaped the torment of his mind’s hell,’ ” Newmore cited from memory and shook his head.

“And then, Newm...” the girl said anxiously.

“What now?”

“Arben wrote this poem for me. I promised not to show it to anybody.”

Linda sighed.

“Don’t worry, Ginger. I’ll keep your secret.”

“Will you help Arben?”

“I’ll try, but I can’t guarantee success. At any rate I’ll do all I can.”

Linda rose.

“Thank you. I want to congratulate you on your engagement now. Can you tell me who she is?”

“Her name is Science.”

Linda flushed deeply.

“Could you spare me your jokes at least once?”

“It’s not a joke, Linda. I have promised myself to science and I want no other life-mate. But I would like to be friends with you.”

They left the cafe in silence.

As they stepped on the moving walk, Newmore remarked,

“It seems to me Arben means a lot to you, my dear.”

“He does,” Linda answered in an undertone.

“You are in for a hard time...”

“Sometimes Arben is so defenceless...” Linda said after a pause, “like a fledgeling which has fallen from its nest. And on other occasions he flies off the handle for no reason at all... He feels ashamed later, of course...”

“A curious character.”

“We can’t all be geniuses.”

“What does it matter whether one is a genius or not?” Newmore said thoughtfully. “We are all made of the same stuff, aren’t we? Remember what the ‘all-seeing .eye’ said to you on this score?”

Linda flushed.

“You’re hateful!” she muttered angrily. Endless house walls glided past them.

“I’ve said innumerable times and I’ll say it again, Ginger: the ‘all-seeing eye’ was not offensive...”

"You are hateful."

"Perhaps so," Newmore said placatingly. "But such is our world—hateful and evil. Such is the truth. Is it my fault?"

"I have a different opinion of the world."

"Then you see it through rose-tinted spectacles. Like an ostrich you hide your head in the sand. This is not for me. I prefer looking truth in the face. Tell me more about Arben and his symptoms," he suddenly concluded.

He listened attentively, nodding with satisfaction now and then, as though what she said confirmed some secret thoughts of his own.

"This is what we shall do," he said when Linda finished her story. "Introduce me to Arben, and I'll see what I can do for him."

They stepped from one moving band to another until they reached the slowest and got off it near Linda's street.

It was a narrow street built up with old houses which stood as close as teeth in a jaw.

"A famous scientist and you travel by the moving pavement like an ordinary engineer," Linda remarked spitefully. "You have plenty of money now, why don't you buy yourself a car?"

"I need the money for other things, Ginger," he said. "I told you I have an idea... I'm afraid it will cost me a pretty penny."

Linda stopped in her tracks.

"Surely you're not going to sink all your money into yet another experiment?"

"Sink is right, Ginger," Newmore affirmed, placing his arm on Linda's shoulders. "The

only thing I'm worried about is that it will not be enough."

"You're crazy!"

"Just listen to this," Newmore said plaintively. "I am hateful, and now I am crazy as well. Not too many vices for one mortal?"

"I did not mean to offend you."

"It's all right."

For a while they walked in silence.

"You know, Newm, I could never quite make you out," the girl finally broke the silence. "As a matter of fact, I didn't even try. For me you are a problem that has no solution. Or has an infinite number of them."

"I don't always understand myself," Newmore said half sincerely, half affectedly.

"Still, I think you ought to buy a car," Linda said, changing the subject.

"I *am* going to get a car. The firm is giving me one for my valuable services."

They had approached Linda's house.

"Goodbye, Ginger."

"Good luck, Newm."

After climbing several steps Linda stopped and looked back.

"Will you take me for a ride in your new car?"

"By all means," said Newmore, waved and turned to go.

As she climbed the stairs Linda thought about Arben. If Newmore nicknamed her Ginger, Arben's pet name for her was Gipsy. When they had said goodbye at this very staircase last time, Arben said: "I am your slave, Lindie. The slave of your kind heart."

No, if she married Arben she had no prospect of owning a car. Nor a lot of money. But did it matter? She did not mind riding on the underground and moving pavements and only taking a taxi on grand occasions. Money was not all.

And why had Newmore suddenly displayed such a lively interest in the modest person of a rank-and-file engineer? Newm never did anything without a purpose, without a long-term reckoning. She shouldn't have shown him Arben's poem. Laying the poor man open to ridicule!

"Never mind, I'll introduce them, and then Arbie can see for himself," she decided, as she took her key out of the bag. "After all he can always decline Newm's help."

The key turned with an effort in the rusty lock. Before opening the door and walking in, the girl cast an eye round the landing. Suddenly she felt tired and depressed. What was in store for her? Her future was concealed in mist, the same mist that filled Wilson cloud chamber, if Newmore was to be believed.

The wall was streaked with damp, very dark spots nauseatingly familiar. Right beside her door was a spot shaped like a crab. Above was an unshaded and garish electric bulb.

Linda entered the room and stopped before the blind eye of the videophone. She yearned to call Arben, to have a talk with him. She even touched the cold connection key. But what if he was working? He would be angry at the interruption.

Of late Arben had to work a great deal

in the evenings. The poor dear probably could not cope with all his work in the daytime, although he offered a different explanation. His colleagues, he averred, conspired against him, even going so far as to spoil his apparatus—anything to do him a dirty trick.

“I’ll call him in the morning,” Linda decided.

Arben was early for his date with Linda. He felt restless. To his usual depression was added bewilderment over the astonishing offer made him by Newmore, Linda’s friend whom he had known years ago when they played in the same basketball team.

Linda brought them together again two weeks before, and the two men got on well together. Friendship with a famous scientist could not but be flattering to Arben with his morbid pride. Newmore proved an extremely perspicacious man. In a matter of days he became aware of Arben’s troubled state of mind and then hinted that he knew a way of helping him, although he offered no explanation as to the details. A way that involved certain danger. Now Arben knew what it was all about and felt terribly irresolute. The worst thing was that he could not discuss it with anybody, not even Linda, the only person in the world whom Arben regarded without a shade of suspicion. But Newmore insisted on utter secrecy, whether he accepted or not.

Well, he could keep a secret as well as the next man, as long as the idea proved workable. And why not? Some people had all the luck in the world. Could not he be lucky just once?”

Arben strolled about the park alleys as he waited for Linda. The leaves on the maple-trees and acacias had turned rusty, seared by the cold flames of fall.

Arben looked at his watch. Linda had just knocked off. It'd take her another twenty minutes to get here, making two changes on the way—from aerobus to the underground and then to the moving pavement.

How better kill the time, he wondered. Should he go to the “chess ring”, watch a game, perhaps?

Linda would know where to look for him.

Arben was fond of chess, but did not venture to play in the park, in the presence of spectators, afraid that his nerves would crack and he'd make an unpleasant scene, as he was wont to do of late.

Sometimes, as he watched a game, he conceived a really brilliant combination with a firework of sacrifices. All that was needed was to cede the bishop with a check, so as to lure the king out, move the rook to thwart the opponent's queen ... and there he was ... there he was... His brain became clouded and familiar exasperation welled up in his chest.

Arben could spend hours watching battles fought on the sixty-four squares. But he did not usually have the time.

That day things had been as bad as always at the Western. Actually worse than always. In the morning he was disgustingly rude to a new laboratory assistant Grino, who broke a vacuum tube inadvertently. The tube was not worth a brass farthing, but Arben flew into a rage about the silly accident.

Chalk white, Grino stood before him and said not a word to all his railings, which irritated Arben most of all. He was on the point of threatening him with dismissal when Grino spoke barely audibly:

“I haven’t slept all night... My mother is dying...”

No, it was not pity that made Arben choke on the threatening phrase. He denied pity had any place in human relationships, considering it beneath men’s dignity and an obstacle to work. No, it was not pity, it was the word “dying” which took the wind out of his sails. It brought a breath of scorching wind, reminding him of that afternoon in July he was not likely to forget as long as he lived...

Then he had a fight with old Don Flesh, a watchman at the Western, a veteran of the first legendary flight to Venus. The old man had taken in a stray dog, installing it in a kennel he had built by the brick wall which encircles the Western. What was it to Arben, it would seem. Yet he made an ugly scene, smashed the kennel, hurting his hand in his frenzy, kicked the whining dog and reduced old Don to open-mouthed indignation.

A ring of amused observers had formed round the picturesque group composed of himself, Don and the dog, and accompanied the proceedings with ironic comments. These comments served to add fuel to the flames. Arben by then regretted having staged the stupid scene and was seeking an out. But all around were mocking, insulting or bored faces. No one cast him a saving line. And again an

old memory, which had been forever smouldering in his mind, broke forth in flames. To be sure, all this had happened before! It had been exactly like this at the training airfield. Only instead of the guard lodge there was standing at a distance a hangar with a corrugated iron roof, and underfoot was not asphalt but concrete slabs with crude seams of welding. And it had been hotter still: it was July, early afternoon, with not a breath of wind and frenzied rays of sun falling almost vertically. And he had also stood in the centre of a ring and mocking remarks were showered on him like they were just now.

Arben pushed away old Don, who was waving his shaky fists at him. Snide remarks stabbed into him from all sides:

“Good for Arbie!”

“Arbie at his best!”

“Just hear him yell!”

“Leave him be, he’s flown off the handle, that’s all,” somebody said reasonably. He thought it was Grino. But his voice was so much crying in the wilderness.

“He’s forever flying off the handle. How long are we going to stand for it?” squeaked Miss Sheila.

The crowd was growing.

“Arben started the row, I was here and saw it all,” somebody was explaining to new arrivals. “What a drag! What has that dog done him?”

“Give him one on the jaw, old man,” somebody advised Don Flesh.

“Flesh has topped a hundred, he can’t stand

up for himself," somebody said.

"And Arben is a quarter of his age!"

"Yes, manhandling an old man, what glory! Staging a fracas every day!"

"Sock him one, Flesh," a chorus of voices insisted. They hankered for blood.

Arben raised a hand, as though to ward off a blow. It was bleeding.

"Look, he's had one already!"

Oh, how he hated those smirking mugs! They all deserved to be put in that catapult and smashed to a pulp against the hangar ceiling!

The bell announcing the end of the lunch break put an end to the revolting scene. A good thing some boss had not arrived on the spot, the thought flashed through Arben's fury-fogged mind.

The curious dispersed, disappointed with the anticlimatic end.

...Arben was watching a game, but his thoughts were far away.

Newmore had explained to him that his discovery, which could cure Arben, was based on the principle of particles and anti-particles, the tiny bricks of which the universe is built. Eventually Newmore's discovery was to rid mankind of all ailments.

As far as Arben gathered, every particle could, in principle, be charged with colossal energy. And, according to Albert Einstein's equation, mass was equal to energy divided by a square of the velocity of light. So the greater the energy the greater the mass, that much was clear to everybody.

"But that means that if the energy charge

is big enough a particle may be charged with a huge mass," Arben reasoned, "as big as the mass of the Earth, say, or perhaps even ten, a hundred, a thousand planets."

When such a particle, flying at a tremendous speed, for some reason or other stops its headlong flight, its energy will be transformed into mass—and a new world will be born. A planet, perhaps, or a whole planetary system, or a star, or even a galaxy. And all out of an infinitesimal particle which can't even be seen through an electronic microscope.

Newmore might have ridiculed these conclusions, for physics was not Arben's strong horse, but the grandiose pictures of the birth of new worlds out of micro-particles fascinated Arben's easily inflammable imagination. And so, he reasoned, having been destroyed by a cosmic catastrophe, our world may be reborn in some other corner of the universe? So there is no death properly speaking. And what about the hangar's corrugated iron roof that boomed with a many-ton blow? What about the heavy drop that fell on Arben's sleeve?

Arben felt excitement grip him that usually preceded a burst of improvisation. He stared at the chess board, at the plastic figures waging, like people, an eternal battle among themselves and in his head lines took shape inspired by his talk with Newmore:

*The world had been going its usual round, until one day
It knocked into another world
And flared up instantly like a sun
To the site of its destruction.*

*Particles of fantastic energies
Diving into dispassionate space—
That was all which was left of the proud world.
But it did not die!
Centuries passed,
A new nebula swam into view,
And the fragments ceased their sleepless rush,
And became new worlds.
So a world disappears to be born anew.
To be born of a cosmic particle.*

Pronouncing to himself the last line, Arben heaved a deep sigh, as though awakening from sleep, and passed his hand over his hair.

There was Linda!

The girl waved to him from afar and Arben made his way out of the crowd of watchers and walked towards her.

“Why is your hand bandaged? Have you hurt it?” Linda asked as they turned into the side alley towards the arbour they had come to regard as their special retreat.

“I cut it,” Arben said reluctantly.

“A bad cut?” Linda asked anxiously.

“No, nothing.”

“At the Western?”

“Yes.”

The openwork arbour was unoccupied and they sat down on the sunny side, to catch the last sunrays of the summer that would soon be gone.

Linda peered anxiously into his drawn face.

“Did you have trouble?”

“Trouble is my second name,” Arben answered with a wry smile.

“I say,” Arben continued, “you haven’t lost that notebook, have you?”

“No, why?”

“I don’t know, it just occurred to me... I wouldn’t like strangers to read what’s in it.”

Linda said nothing to it. For a while they did not speak, just idly watched some little kids dancing a reel dance round a lonely maple-tree.

“I say, Linda, what would you say if I ... disappeared?” Arben asked.

“What do you mean disappeared?” Linda asked with a puzzled air. “Are you going away?”

Arben shook his head.

“No, Gipsy, I’m not going away. Not that I wouldn’t like to, but how can I go away from myself? No, I mean if I disappeared altogether. Ceased to exist, so to speak?”

“Don’t talk in riddles, Arbie,” Linda pleaded, badly frightened by now.

“Well, I imagine I’m making myself clear enough.”

“How daré you?” Linda cried seizing Arben’s hand. “I know you’re going through a bad spell, but still it’s a terrible sin...”

“I do not intend to commit any sin.”

“But you must mean suicide! Don’t you know life is given us so that...”

“But I have no intention of killing myself!” Arben interrupted her.

“Then what do you mean by this disappearance nonsense?” Linda demanded.

Arben hesitated.

“Come on, out with it!”

“Well, you see, the ensemble of microparticles

is organised in a certain order..."

"Are you offered a dangerous job?"

"Something like it."

"And you can't refuse it?"

"Yes, I can."

"Then refuse, Arbie!" Linda fixed an intense gaze on him.

"The thing has great importance for me," he finally brought out.

"Can't you be more explicit, Arbie?"

"Believe me, Gipsy, I am not at liberty to tell you all, but if the experiment is a success everything will be fine."

"How can you undertake a dangerous job in your present condition?"

"It's exactly my condition that necessitates it."

"And as the result of it you may, as you put it, disappear, is that so?"

"That is in the event of failure."

"And what happens if it is a success?"

"Then I shall become a completely different person."

"Is it a plastic operation? Have I guessed right? Why did you have to pile on all that mysterious disappearance stuff?"

"A plastic operation?" Arben repeated slowly in response to some thoughts of his own. "Perhaps so. A plastic operation of one's inner face."

"You speak in riddles, like Newmore."

"What has Newmore got to do with it?"

Arben suddenly yelled. Linda started.

"Don't shout, dear," she said in a frightened tone of voice. "I didn't mean to offend you."

He calmed down as quickly as he had flared up and became listless and seemingly devoid of any desires. "Like a condemned man," Linda thought.

"Let's play," Linda suggested to distract him from his gloomy thoughts.

"Let's!" Arben responded animatedly. "I'm in good shape today. Think up a theme."

The game consisted in Linda thinking up a theme and Arben improvising on it.

"It's autumn," Linda said after some consideration. "I fancied I were autumn. I am trudging along, over fields, woods and roads, from one town to another, gazing up into the evercast sky, shaking the yellow leaves off the trees, knocking on people's doors telling them: prepare for the winter, people, for the cold and the snow. The winter will be severe... Not all of you will survive it. I am walking along barefoot, my feet are bruised and I am chilled to the bone," Linda shivered. "I walk and there is no end of my journey in sight..."

"Good!" said Arben stopping her. He rubbed his forehead and concentrated.

The familiar sweet perturbation that he had experienced half an hour ago took hold of him again, and he began slowly:

*Autumn was trudging, barefoot over marshes,
Shedding bright tear-drops like spangles on dry
grass-blades.*

*Wistfully gazing at migrant birds winging
Southwards their way among petulant rainclouds.
Shivering, she drew close her foggy damp mantle,
Vainly she knocked on the doors of cold houses,*

*Swept a despairing glance over the woodlands
Seared by the russet flames of near extinction.
Hard-beaten tracks she'd abandon at nightfall,
Walking off into untouched desert vastness.
There she would stand gaping thirstily skywards
Catching the moisture of waterlogged stars.*

“Well done, Arben,” Linda exclaimed and kissed him.

“Think up another theme.”

“It’s enough.”

“Please, Gipsy,” insisted Arben. “I feel so strong I could overturn the world like Archimedes. Just give me a point of support. Well?”

“You are killing yourself.”

“Linda, please!”

“Okay,” the girl gave in. “Only don’t compose more than four lines, is it a deal?”

“I am waiting.”

“Remember the last time you walked me home? We stood near the entrance, a moon was suspended above the roof, and then a small cloud flew by and covered its centre and you said that...”

“The moon resembled a doughnut.”

“Then a cat walked out onto the eaves,” she continued. “Such a very fluffy cat. It walked slowly and sniffed at the roof. Then it stopped and regarded us. Remember what you said?”

“That it was not a cat but a dweller of a distant planet who was seeing earthmen for the first time in his life.”

“I allow you four lines for the entire picture.”

“Rhymed?”

“By preference.”

Arben interlocked his fingers and read in a sing-song voice imitating a Methodist pastor:

*There's the moon, a fluffy doughnut,
Dozing calmly in the heavens.
From the roof a Martian tom-cat
Looks suspiciously at humans.*

“Bravo, Arbie,” Linda exclaimed and clapped her hands. “You have outdone yourself today.”

“Too true,” thought Arben, feeling his excitement give way to profound apathy. “And ahead is a nightmare-ridden night. Is this perhaps my last improvisation? What if this gift of the gods disappears when Newmore's project is implemented?”

They stayed in the harbour until it became quite dark. Arben was reluctant to part with the girl. He had a feeling this might be their last meeting.

Lamps were lit along the alleywalks. There were few people strolling about; it was dangerous to walk alone in the park at night.

“Come, let's go,” said Linda.

“Wait some more,” Arben said clutching her hand.

“Aren't you afraid of a holdup?”

“In a few days I might become the strongest man in this city,” Arben said half-jokingly half-seriously. “I'll make short work of a whole gang then, like so many kittens. Would you like that, Gipsy?”

“More fog, more mysticism... First you're going to disappear, then you're going to become

a strongman. How am I to understand it all?"

"I am not at liberty to tell you, Gipsy," Arben answered and grew morose again.

Linda was consumed with curiosity but felt it was no good questioning Arben. He would have told her if he could.

A small figure appeared in the depth of the alley. It was a boy. One might have thought he had got lost, but he strode on confidently, obviously on his way back home from a walk, his careless parents having left him to his own devices.

When he reached the lamp by the arbour, the boy stopped and began inflating a balloon. The flimsy casing soon filled with air and an orange clown with huge ears grinned broadly from it.

His work finished, the boy tossed the balloon into the air several times. The balloon floated down slowly, as though reluctantly.

The boy's game was short-lived. Before he made another few steps, his balloon descended on a bush and was pricked by a thorn.

A pop!—and there was no balloon. The grinning clown shrank and disappeared.

"This is the end of the clown," Linda whispered.

"This is the end of the world," Arben responded.

The aggrieved boy fingered the scrap of elastic, all that was left of the balloon, tried to inflate it, and when nothing came of it, tossed it aside and disappeared round the corner.

Arben asked Linda for her notebook, leafed through it hurriedly, found a clean sheet and began writing on it. After a while, he crossed out what he had written and began writing anew. The lamp shed a dim light and so he had to bend low over the notebook.

He wrote a long time.

Linda was chilled to the bone, but did not dare to distract Arben. From time to time she cast a swift glance at his frowning forehead and pursed lips but kept her peace.

The alley was quite deserted when Arben finally put the last fullstop, closed the notebook and gave it to Linda, saying:

“Now I’m like that balloon—empty of all air.”

The girl made to open the notebook, but Arben stopped her.

“Not now, Linda, you’ll read it at home.”

They rose and walked towards the park exit.

The girl was profoundly perturbed by all she had heard, and even Arben’s brilliant improvisations, which invariably impressed her, had failed to relieve the oppressive feeling.

By the park exit the endless band of the moving walk was rolling past gleaming in the light shed by the street lamps.

“Let’s take the underground,” Linda suggested.

“I hate the underground,” Arben muttered. “Why, are you cold?”

“Not really,” answered Linda, barely able to keep her teeth from chattering.

When the young people stepped on the moving walk, the wind tore at them with redoub-

led fury. Arben took off his jacket and placed it on Linda's shoulders.

The streets they dashed through were deserted: in these working-class districts people went to bed early.

"The city is dead," Arben broke a long pause.

"But there are lights in the windows," Linda retorted.

"No matter. The people are all dead, but the lights are still burning," Arben insisted with a stubborn toss of his head.

"You are too glum today, Arben... You haven't even told me anything about how things were at work."

"There is nothing to tell."

"How did you come to hurt your hand?"

"I'll tell you some other time."

Linda became warm under Arben's jacket and her mood improved.

"When shall we meet next time, Arbie?" she asked. "Tomorrow is Monday and I could knock off early."

"I have no idea how things will shape with me, Gipsy. It all depends on that new undertaking I told you about."

When they were saying goodbye, Linda asked: "Do you mean you won't have any free time at all now?"

"I don't know. We'll discuss it on the videophone," Arben answered. His voice was tired and dull.

Back home, Linda sat down into her rocking-chair, switched on the stand-up lamp and produced the notebook.

She was so tense with excitement she found

difficulty in making out the words Arben had written. She had a feeling this might be his last note, something in the nature of a farewell. Painfully, she waded through the jumble of crossed out words and phrases. Finally the poem emerged:

*Galaxies scattered in every direction,
Stars blazed like coals, white-hot in a brazier.
Young was the Universe, ever expanding,
Dispatching her messengers south, east and west,
Calling and beckoning, luring along
The bright path of light, infinite, endless.
But one tiny star, endowed, alas, with reason
Was sad and forlorn, though she kept her own counsel.
For she knew that the Universe would soon start shrinking
Like a punctured balloon from which air was escaping.*

Linda grew thoughtful. The notebook slipped to the floor, and she let it stay there.

What is he planning, that crazy man? Why had he flared up when she mentioned Newmore? Was he jealous? No, he couldn't be. He knew they were childhood friends, and there never had been or could have been anything between them, they were too different.

Linda was hungry but so tired she did not have the strength to go into the kitchen and make herself a meal.

“ ‘I feel quite shattered,’ said the cup when it fell from the shelf down onto the floor”—that was Newmore's gag, made up on the occasion of the breaking of a Saxon porcelain cup.

She was quite shattered too.

“I'll rest awhile,” she thought sleepily,

“and then have supper.”

She dropped off sitting in the rocking-chair. She dreamed of a clown smiling down from a balloon. The air was let out of the balloon, and the clown was no more. ...Then Arben walked out of the harbour and picked up the remains of the balloon.

The dream was very clear. She seemed to be watching Arben as he tied up the hole in the balloon carefully and then started to inflate it.

“Careful,” Linda said. “It may burst.”

“Don’t you worry,” Arben answered. “This balloon is our world, and the world cannot disappear, for death does not exist.”

“And if a catastrophe occurs?”

“It will be regenerated like this balloon has been regenerated,” Arben answered.

The balloon with the clown painted on it grew in dimensions. Linda noticed, horrified, that as it grew it swallowed all objects it touched: it had swallowed part of the bench on which they were sitting, part of the openwork harbour wall, Arben’s lips, his face... She opened her mouth to scream, to warn Arben, but no sound came. She wanted to rush to Arben, to save him, but could not tear her body, which had grown heavy and unwieldy, from the bench.

The balloon had by then swallowed all of Arben and approached her. The horribly huge clown grinned next to her eyes, but the grin was not frightening: it seemed to say that one needn’t fear anything at all since death did not exist... With a supreme effort of will she raised her hand and poked her finger

in the balloon with all her strength. The balloon burst with a terrible pop, but there was no Arben inside: he had disappeared, dissolved in thin air.

Linda opened her eyes. Early morning was breaking. The stand-up lamp was lying on the floor at her feet. Both its bulbs were smashed to bits.

...Waves rolled in from afar. They seemed to be appearing from beyond the line of the horizon that was etched clearly by the sun which had just sunk into the ocean. A tiny rocky atoll was shuddering from the blows of the breaking surf. Arben stood with his back against the only palm-tree on the island. The wind was tearing at his gray jacket and rustling the evergreen leaves high above his head. Then it sped on into the expanses of the Atlantic.

There was a soothing rhythm in the monotonous rolling of the waves and crashing of the surf. He enjoyed standing there and watching the elements at play. He enjoyed spherofilms which made it possible to bring back the past, even if only a tiny particle of it. What could be better than forgetting the present, switching it off, as it were, for an hour or so, and letting the mind go blank at all.

The month of bliss was over. The month of grace granted him by Newmore. Could it be that Newmore had made a mistake and he would have more time? No, Newmore seldom made mistakes. Had really a month passed since his memorable talk with Linda in that harbour? Then he feared nothing.

Actually there was nothing to fear now either. All he needed was to be careful. How did Newmore put it? "Alva is stupid, it's the simplest thing on earth to trick him. But you must remember about him every waking moment that's all that is to it."

Remember! As though one was likely to forget if his life was at stake.

Arben had not agreed to Newmore's unusual proposal without hesitation and doubts. He only said "yes" when life became quite unbearable. The experiments in his department had been misfiring for a long time. He was forever on edge, nothing came out right. There were endless mishaps, big and small. He broke an expensive integrator and quarrelled with his chief. It transpired that Old Wilmerton was dead set against him. Arben's friends kept telling him that all his troubles originated in his bad temper and irritability. In a medical handbook Arben read that bad temper, is just another name for frayed nerves. But when he told Newmore about it, the latter, as usual, turned it into a joke.

"So you prefer medical handbooks to doctors, do you?" he had asked.

"What's wrong with it?"

"And you prescribe yourself treatment according to the handbook?"

Arben nodded.

"In such a case you are running the risk of dying of a misprint," Newmore said with a laugh.

"Does it matter what one dies of?" Arben

said with a shrug. But his indifference was largely feigned.

Whether his friends or the handbook were right, things were going from bad to worse.

...Night descends quickly in the tropics. A minute ago he could read the smallest print, and now shadows had crept up from beyond the rock, stretched across the lagoon, merged together, and all was darkness. A barely discernible native pirogue came into view round the promontory, and myriads of phosphorescent dots danced on the waves.

Several moments later the lighting panel, switched on by the automatic device, started to give off a ghostly light. Walls emerged from darkness, from non-existence. Arben fancied that they had closed about him.

The trunk of the palm proved to be the back of the armchair.

Arben sighed like one awakening from a dream. He looked at his watch, although he knew what the time would be—half past ten.

It was a good thing he had asked permission to stay at home this first day of his new existence. It was much safer, though one could not sit it out forever. Anyway, the first day was drawing to a close.

The plain furnishings of the room made one think of a fourth-grade spaceship cabin. Nothing superfluous—a suspended bunk, a desk, a drawing board, an armchair. But Arben had no complaints—what more did one need. And then his window commanded a magnificent view of the Western grounds. The landscape

was reminiscent of a picture Arben had seen in childhood. It was an illustration to a science fiction story written in an epoch when man's foot had not yet trodden the Moon, to say nothing of other planets. The artist portrayed a future city on the Moon. Food for his imagination proved to be plentiful on Earth, both bright and sombre. The openwork towers of cosmic communications were interspersed with many-coloured domes, the bands of moving pavements ran in all directions, bordered with illumined safety edgings, cuber-structures hovered above the narrow strips of pavements, compared to which antediluvian monsters looked like so many innocent toys. And take the testing ground for protein systems grown by the company! There was a time when Arben loved watching through a telescope the staggers, falls and sommersaults of those comical freaks, though he knew such a pastime was officially frowned upon.

Once Newmore had dropped in at his place.

"What do you think of the landscape?" Arben had asked when Newmore approached the window. "Like it? Urbanisation at its extreme."

"Ravings of a mad architect," Newmore had said with a shrug.

All the same Arben liked looking out of his window, although he no longer had the telescope, confiscated by the guards. Arben stood for another minute in indecision, still under the effect of the spherofilm he had seen. He had made it himself the year before last while on holiday on an Atlantic island.

That was wonderful time!

Then his eye fell on the blind eye of the videophone and he recalled that he had not seen Linda that day.

Should he call her? Or was it too late? With some hesitation Arben dialled her number.

Linda must have been waiting for the call.

"Kind of you to call," she said, adjusting an unruly lock of ginger hair.

"I have been terribly busy today," Arben began.

"What with?" Linda asked, screwing up her eyes mockingly.

"Well, you know how it is... There were certain calculations to be made in a hurry."

He trailed off.

"I see. Another secret."

"Linda!"

"Oh, I don't mind. I have no use for the Western's secrets. So you decided to apologise?"

"Who to?"

"Me, I suppose."

"But I told you I've been busy the whole day..."

"Yes, I understand. You've been busy all day and never left the territory of the Western. Is that so?"

"Yes."

"They must be overworking you terribly, poor dear," Linda went on. "How else can one explain that you passed within a foot of my person without recognising me?"

"Why, I never set my foot outside the Western!"

"Yes, you did. And you walked past me

without so much as a hello.”

“You must’ve been seeing things, Gipsy. I never left home.”

“Is there a chance that I’ll confuse you with anybody else? And generally I am sick and tired of your change of moods. You are tenderness itself one day, and then you go into a sulk and don’t even call. If it’s all on account of my going to the pictures with Newmore the day before yesterday, nothing could be sillier.”

“Than what?” Arben asked sarcastically.

“Don’t split hairs,” Linda retorted. “Nothing could be sillier than your behaviour. Firstly, you knew he invited me. Secondly...”

“Christ, Linda, I never gave it a thought!” Arben interrupted.

“You haven’t been giving me much thought at all this last month. Do you think I am blind? Or that I don’t remember all that mysterious talk you dished out to me in the arbour? Fairy tales for small children that’s what it is.”

“The experiment I had in mind, Linda, has not been completed yet.”

They both paused. Arben was in the grip of that indecision which assails an astronaut who hesitates to step out onto a new planet, which may be full of unknown dangers.

But step out he must!

“Let’s meet tomorrow,” he finally suggested.

“I finish at five.”

“Excellent. I’ll be waiting for you at six. The same spot?”

“Don’t be late!” She wagged her finger at him. “By the way, there’s a concert of electronic

compositions in the Open-Air Theatre.”

The screen went dark.

Arben began pacing the room, his hands interlocked behind his back. No, this was not the paradise Newmore had painted for him. Surely he cannot spend the rest of his life within four walls for fear of being waylaid by his double Alva?

Arben had changed a lot over the past months. He was himself aware of the change in him. In this Newmore was true to his word. Life had become much easier for him. It was as though all these years he had been carrying an enormous weight on his shoulders, and now this burden was diminishing with every day. His recollections became dimmer and more distant, and the most terrible of them, which had been burning him like fire, melted away altogether. All that remained was memory of pain, “memory of a memory”, but Arben could not recall what it was all about. It was like those phantom pains, amputated extremities cause.

Another thing he lost was his gift of improvisation—in this whole month he did not compose a single line.

Arben did not have any difficulty in making his way by the underground from the Western to the so-called green belt.

He had tender feeling for this stunted park, poisoned by the breath of the city. He had had quite a few pleasant moments here, playing chess with a chance partner, or, more often,

watching a game. The bench on which a game was in progress usually became surrounded by a crowd of fans, who divided into two parties and made bets—like at the races. Here, on the chess ring as they called the place, interesting types gathered. The majority were aged navigators, who knew no other profession besides space flying. There were also degraded characters who had no definite occupation and idle youths aflame with a passion for chess. There were many who had been thrown overboard by the onslaught of automation, which gave them but one privilege—unlimited leisure. “The scum and wreckage of a big city” was the characteristic Newmore gave them that one time Arben talked him into coming here.

Linda met him by the entrance.

One did not come to the chess ring with a lady, so Arben just gave the crowd of watchers an envious glance.

Linda, meanwhile, was talking incessantly.

“You were late as usual and so I had time to compose a verse—two lines. Shall I read it to you?”

“Go ahead,” Arben said absently, his eyes scouring the crowd of strollers.

*Shut in by wrought-iron railing,
Pine young grass-blades, sad, unhappy...*

Linda declaimed with feeling, “But I can’t think of a continuation.”

Arben stopped, thought a moment, then pronounced slowly:

*Shut in by wrought-iron railing,
Pine young grass-blades, sad, unhappy.
How they yearn for breadth and freedom,
But the iron keeps them captive.*

“Bravo!” Linda cried and clapped. A passerby gave her a curious look.

“Wait a minute,” Arben stopped her, glanced around and finished the verse:

*Dust and soot belched by the city
Cover them with crepe-like coating.
Smothered, the poor grass-blades sicken,
Languidly this life departing.*

“But it was you, whatever you say,” Linda picked up their conversation of yesterday. “You wore this very gray jacket—I’ve never seen another like it. Only you looked terribly pale. You are not ill, are you?”

“Lindie, believe me, I never left my flat yesterday. Where did you see me?” he asked illogically, suddenly struck by a frightening idea.

“There, you’ve given yourself away, mister,” said Linda with a smile.

They had meantime approached the open-air platform where a recital of electronic compositions was to begin shortly. The composer was an electronic navigator, which had recently brought back an automatic spaceship that had been sent to the region of Centaurus seventy years before. Concerts like this one had become traditional. Newmore, and Arben as well, preferred this music to any other. But generally,

it had not yet received recognition.

“Well, I dropped into the automatic cafe for breakfast. You know, the one on the corner of the 10th Street, where the panorama is.”

Arben nodded.

“Of course you know,” Linda remarked testily. “You were coming straight towards me. And gave me an insolent glance too. I was just about to call your name, but you were lost in the morning rush.”

“Well, and what was he wearing? I mean the one you met?”

“What were *you* wearing?” Linda repeated pointedly. “But I told you—what you always wear.”

“Please, remember the details, it’s very important.”

Linda pondered.

“Did nothing strike your eye?” Arben insisted.

“Well, the boots perhaps...”

“What about the boots?”

“They were with vacuum pads. The kind they put on during space journeys, so as not to float in a state of weightlessness, when the ships lay on course.”

“Are you sure?”

“Of course I’m sure,” Linda said offendedly. “I meant to ask you why the masquerade. After all the automatic cafe is on firm ground, not in space. But you looked so...” Linda was at a loss for a word, “so pale, that I just stood there looking after you. Will you tell me what it means?”

"Nothing," Arben muttered.

"Well, I'm not prying."

Linda looked hurt.

They came up to the box-office. The automatic ticket-seller was displaying the "sold out" notice. That was a surprise: until then music composed by electronic navigators enjoyed no particular popularity.

"What a pity," Linda said with disappointment. Suddenly she was simply dying to hear the concert. ("Music of the future," Newmore had said.)

"Wait a minute..." Arben had a madcap idea. He came up to a couple which was regarding the poster. "Excuse me," he said. "Have you come to hear the concert?"

"Yes. Why?" the young man asked.

"It just occurred to me that perhaps you'd change your mind about going and let us have the tickets instead."

"What nonsense," the girl said sharply.

At that moment the young man's and Arben's eyes met.

Arben was smiling brightly. The young man was puzzled: surely he had seen this thin nervous face. The eyes of the stranger shone with kindness. Had he met him? But where? He would remember such a nice face if he saw it once. But he could not remember.

His companion was now looking at Arben too, and the frown cleared off her face. Not a trace of her recent irritation was left.

"We meant to go," she said. "But if you're so fond of electronic music... And your girl too..." She cast a friendly glance at Linda,

who was watching the strange scene in bewilderment.

"I suppose we can hear it another time," the young man muttered. "Here are the tickets. Oh, it's perfectly all right."

He pushed the money Arben gave him into his pocket and the two walked away.

Arben and Linda were just in time.

"Why did they give up their tickets?" Linda asked.

"Such nice weather—they decided to take a walk instead," Arben answered nonchalantly.

"Take a walk! I saw them running like mad ahead of us. They did not want to be late. They only stopped in front of the poster to regain their breath..."

There were murmured protests from behind and Linda fell silent.

The platform looked unusual. There were no musicians and no musical instruments. A table with a tape-recorder stood in the middle of the stage. And that was all, plus the amplifier system.

The first chord was like a sigh. Like a barely audible complaint. Whose? Of the cold metal cast into space by the force of fire? There were no people on the rocket which visited Alpha Centauri—Arben knew that for sure. And still he had an uncanny feeling that only a live creature could heave such a sigh. The sharp and discordant melody at first caused protest in Arben. But with every minute he sank deeper and deeper into this world of novel feelings and emotions.

The vast stellar spaces as seen by the electron-

ic navigator which was in charge of the automated spaceship... Arben suddenly fancied that at last he sensed and cognised space. In childhood he dreamed of becoming a space captain. His dream was not destined to come true, for the commission decided that his nerve reflexes were extra-sensitive. Arben was overcome with disappointment and on the rebound entered a technological college. A rank-and-file engineer employed by a powerful octopus-company—such was the measure of his life's achievement. But as it often happens, the dream, though it never came true, overlaid all of his subsequent life. Arben read all reports (he preferred those made by automatic devices) of cosmic expeditions which were published in the cheap mass series. He had accumulated several thousands of those square booklets in blue covers.

And now, as he listened to the strange music, Arben felt that the long awaited miracle had come to pass... Here he was sitting, or rather suspended in weightlessness before the spaceship's observation screen. The rocket seemed to him, the only man on board, to be motionless. He knew from descriptions that that was the most oppressive feeling that fell to the share of astronauts, and only the strongest were able to bear up under the strain. Years passed, and you still seemed to be hanging in one spot, and the same pattern of unblinking stars surrounded you.

But Arben is well able to keep control of himself. What motionlessness could there be when the instrument panel told you that

the rocket was hurtling through space maintaining the velocity it received in initial acceleration.

Arben puts on boots with vacuum pads and decides to take a stroll through the ship. The music leads him through luminescent corridors that look like tunnels, and through side compartments all clad in a neutrite armour. Protein robots are on duty day and night beside the instruments. These are his crew, his companions. When Arben appears, each reports on the past day (they use earthly time measurements deferring to the old tradition of space flights). Arben listens, gives instructions, makes notes in the biodiary.

The sun... Already a year ago it turned into a tiny star of the fourteenth magnitude, barely discernible in the corner of the screen. But the music suddenly makes the star flare up and outshine its neighbours. Why is that? Did the melody imbibe all the songs the earthmen ever sang about their luminary?

The music ended suddenly, as though breaking off in mid-note. It took some time for Arben to become aware of his surroundings. Linda beside him looked indifferent and bored.

"I'd rather have gone somewhere else. Pity they gave up their tickets," she said suppressing a yawn. "Frankly, I expected more of this music of the future. Why are you staring at me like that? A meaningless jumble of noises, nothing else."

They were moving towards exit with the crowd. Arben tried not to look at anybody, but those on whom his gaze fell inadvertently

immediately made way for him. Fortunately, Linda was too engrossed in her criticism.

"Come now, admit that you understood nothing either," she whispered.

Arben gave a slight smile.

"Newmore said that a person only really understands music if he participates..." said Linda.

"How's that?"

"It means if he infuses music he is listening to with his own images, his thoughts evolved through suffering, etc. And space is your hobby-horse. No wonder you find music composed by an electronic navigator congenial."

"I can see you have picked up quite a few useful ideas from Newmore," Arben remarked.

He did not glance round quite so often any more. What he feared more than anything had not happened, and his fears gradually dissolved, replaced by a proud consciousness of his own power. He even started whistling a tune. After all he owed nothing to anybody.

They passed through the green belt and entered the labyrinth of the streets, as narrow and dusty as they had been a hundred years ago. Summer seemed to have made a comeback, jostling autumn out of its way.

"I don't want to go by the underground, it's too stuffy down there," Linda said, passing her finger over the plate glass of a shop window. Behind it was displayed a huge dummy trying on a space-suit—the advertisement of the ubiquitous Western. "Such a lovely evening. Let's walk home."

"I don't feel like it," Arben replied, remem-

bering Newmore's cautioning about avoiding open spaces, and old fears descended upon him again.

"Take a taxi then," Linda demanded, knowing full well that at this time of evening taxis were not to be had for love or money.

"Let's try," Arben said cheerfully.

They approached a taxi stand. A long queue had gathered. Every second sparkling glass-covered droplets sliding noiselessly on an air pillow, rolled up and departed with a fare, but there were many more people than taxis.

Arben cast a glance over the queue and walked up nonchalantly to its beginning. Linda hung behind, expecting noisy protests. But nothing of the kind happened. People made way for Arben. A car came to a gentle stop before them.

"Next?" the automatic driver called.

Arben and Linda climbed in. Arben dropped an advance into the slit of the meter, and the machine accelerated abruptly, making the passengers press back into their armchairs.

"I did not know you were a hypnotiser," said the girl.

"Seems to be an easy art," Arben replied lightly.

"Can you hypnotise the driver into not taking any money from us?"

"My power does not extend that far," Arben laughed. "An electronic system is very different from people."

"Oh, it can make mistakes too!"

"But it is not subject to hypnosis."

The machine stopped at the point that

they had named. Arben put money into the open maw of the meter, and the door slid open.

“Mysteries thicken around your lordship,” Linda said. She had supreme faith in hypnosis, and so was not particularly amazed by Arben’s trick. “You deny meeting me yesterday, and I can only take it as a joke... Only I don’t see the point of it.”

In the doorway Linda turned, smiled and waved a hand at Arben.

Arben examined the contents of his thin purse and made for the nearest underground station. Now he could give his mind to Linda’s meeting of the day before. Could it really be Alva?

The staircase was barely lit by a single bulb coated with dust. As she mounted it, Linda suddenly was impelled to look back. A familiar figure was following her up the stairs, only dimly visible in the semi-darkness. It was Arben with whom she had only just parted. She had seen him turn the corner. She could have sworn to it. This Arben looked very strange—just the same as he had yesterday, when they met by the automatic cafe. Linda wanted to call to him, but her voice did not obey her. His face impassive, Arben was approaching her, step by step. His cheeks were terribly pale. The wide open eyes expressed nothing. Linda stood stock-still. The figure was nearly upon her.

“Arben, what’s the matter?” she finally whispered when they were separated by no

more than a dozen steps.

Arben made no response, just continued on his way, moving his legs like a mechanical doll.

Linda stepped out of his way. Arben passed her, then made a sharp turn and disappeared. Linda fancied he had walked through the wall. Or did he enter a door? But there were no doors on the stairway. Only a dirty wall corroded with damp. Linda touched the gray spot that resembled a crab. She felt like screaming.

The bulb continued to shed its meagre light—this most ordinary of objects, the symbol of humdrum reality that had seemed unshakeable only a minute ago.

In all her twenty-five years Linda had not encountered anything like this. She was quite shaken and stood on the staircase for another five or ten minutes trying to think of a solution to the puzzle.

“I’ll tell Arben tomorrow to stop these stupid tricks,” she finally decided and began to look for the key in her bag.

To begin with Arben poohpoohed Newmore’s offer.

“You’re pulling my leg,” he said.

Arben knew that his new friend, ambitious and truly talented, had already made a name for himself in the world of science. But the offer he had just made him...

“Make up your mind,” said Newmore. “At least you will taste of the supreme joy of being

free of complexes, of being a superlative personality.”

“Yes, but at what price!”

“No price is too high for such joy.”

“Suppose I agree. How much time will you need to tune in Alva, as you call it.”

“A month will be enough I expect. I can begin today.”

“Right away?”

“What’s the point of putting it off?”

“Suppose, if it works as you say,” Arben said racked by indecision. “To have power over people is a good thing of course. And to get rid of nasty memories is good too. But what if Alva corners me?”

“Alva is stupid—remember that. His logical scheme is primitive in the extreme. Actually there is no scheme, he is merely tuned to resonance. You won’t find it difficult to avoid him. And try to be in an equable mood, then Alva will have greater difficulty in locating you. Funny chap, you’ll have a wonderful life!”

“And if I meet him?”

“Well, one has to pay for what one gets. If you meet, it will be just too bad for you.”

Arben pondered this. His imagination painted rosy pictures for him. Newmore’s offer did promise a wonderful life—as compared with what it was now. His frayed nerves would become as strong as steel cables. Newmore promised it and Arben had full confidence in his word.

Would he really stop waking up at night in a cold sweat, would he stop flying into

rages over nothing, would he stop quarrelling with his colleagues? Was it possible he would not feel like murdering a man who inadvertently trod on his foot in the overcrowded underground train? Was this bliss possible? Indeed, no price was too high for it. To forget, to forget, to forget! Never to think of Handsome Charlie!

"But how does it all work out from the point of view of physics?" Arben asked. "Remember I'm an engineer and don't dig mysticism."

"I haven't yet devised a completely rounded theory, with no loose ends sticking out. But does it matter? The essence of it is that, like with every neurotic, your nerve cells, neutrons, have developed stable vortical biocurrents. So far they have not been able to detect these currents because they are infinitesimal. But I have succeeded in doing so. You must be disinhibited; these currents, which paralyse energy, must be removed."

"And this is possible?"

"My Alva, as I have told you, is made of anti-matter. I designed this system of antiparticles obtained on the Brookhaven accelerator. Alva's density is negligible. To put it crudely, he consists, to all intents and purposes, of vacuum."

"Something like a rare cloud?"

Newmore nodded.

"Will you show Alva to me?"

"Only if you agree to pass on your flaws to him."

"We've been talking all evening, and still much of what awaits me is enveloped in that

same fog that Alva consists of. Why, for instance, cannot he release the annihilation reaction on bumping into any odd passer-by?"

"Because he is surrounded by a protective field," explained Newmore, blowing out rings of smoke.

"Why should *I* avoid him then?"

"You're a different matter. Alva will be your double, or rather anti-double. The result will be much like... Have you seen magnet attracting iron? Well, Alva will be attracted to you in much the same manner."

"What about the protective field?"

"When he comes close to you, this field will disappear, melt away. Nothing can be done about it."

Newmore shrugged his shoulders.

"But you needn't be afraid, Arben!" he cried. "After all Alva is not a human being, an enemy pursuing you. It is merely a cloud which experiences unaccountable attraction for you. On the other hand, Alva will absorb all your jumpiness. He will be your Sancho Panza, your true sword-bearer, on whose flaccid shoulders you will load the burden which has been oppressing your spirit. Alva will be a sponge that will absorb..."

"But couldn't you lock him up?" Arben interrupted, overjoyed at this beautiful way out. "Then I won't have to fear a chance meeting."

"It would be the same as locking up yourself. The territory on which you can move freely exactly corresponds to the territory on which Alva has the right to move freely. If Alva is

locked in a cell, you'll only be able to move on a square equal to the size of his cell. The rest of the city will be forbidden zone for you. Only if the city is free to Alva, will it also be free to you. Anyway, how do you propose locking Alva up?"

"In the same manner they lock up criminals."

"I must disappoint you. With his negligible density, Alva can pass through walls. No, no, not through any kind of wall," he hastened to add, noticing Arben's start. "I'll give you several sheets of ionised plastic, and you will cover the walls of your room with it. As for the street..."

"I have another idea," Arben said triumphantly. "Why not make myself a suit of this plastic..."

Newmore shook his head.

"I know, the plastic is transparent," Arben persisted, "but does it matter? I could make lining for my suit out of it."

"Nothing doing, Arben," said Newmore with a note of regret. "This plastic mustn't be bent. When bent, even a little, it loses its protective properties."

"I could make a lining out of small sheets of plastic joined together."

"This plastic cannot be fragmented."

"Why?"

"Because each sheet is, essentially, one molecule."

"So what? A molecule can be fissioned..."

"Now, why do you refuse to understand, dammit!" Newmore flared up. "How many times must I repeat it? Man has to pay for

everything. Nothing in this world is given free. This, if you like, is the essential law of nature Newton forgot to discover. I have but to correct his mistake.” Newmore took a turn up and down the room. “What it amounts to,” he continued, as though in response to his own thoughts, “is that you want to be happy for nothing, free of charge. That won’t wash, buddy.”

Newmore would not hesitate a minute to stage the unheard-of experiment on himself, had the alfa rhythm of his brain been suitable. He was a brave man and had proved his courage both to others and himself (which is more important). When it was a matter of an experiment, Newmore was like one possessed, and nothing could stop him. Indeed, how many times in the course of his apparently brilliant career (which was, if facts were to be known, quite a thorny one) had he risked his own life! Profit was only a secondary consideration. The important thing was to develop a model that could absorb all human ailings and failings.

The difficulties were formidable. The first thing had to come first—how to solve it in principle. Then he would have to think of a way of safeguarding the lucky one from his deadly double. In other words, of lowering the price for happiness.

Newmore regarded the disheartened Arben. A scout dies charting the way for the army. Without risk there can be no victory. Somebody has to be the first after all.

Newmore came up to Arben and put his hand on his shoulder.

"You are offered a fantastic chance," he said. "You will be a fool to miss it."

"Why don't you look for somebody else?" Arben said falteringly.

"Nobody else will suit my purpose," Newmore said with a vigorous shake of his head. "Do you know what is bioresonance?"

Arben nodded.

"Well, you are in a state of resonance with Alva. This is a rare coincidence, one in several millions or perhaps billions. And the fact that your nerves are so raw is another plus: it is easier to record your biocurrents. But if you refuse, to hell with you!" Newmore suddenly shouted. "It's a pity I have lost all this time."

"Okay, I agree," Arben said with desperation in his voice.

"Good for you. Come along then."

They crossed the laboratory and stopped in front of a narrow sheet-metal plate, which almost merged with the wall. It resembled the door of a safe.

"All this," Newmore slapped the plate, "is nothing for Alva. He passes through steel like a knife slicing butter. But I have no other premises where I can keep him, so I vacated the storeroom for radiological instruments. Anyway, the fewer people see him the better."

"And if he runs away?" Arben touched the door.

"He won't. I told you I had invented a method of containing him—the ionised plastic. This sheeting is a sure barrier as far as he is concerned. For safety I covered the entire interior of this room in plastic. You will see.

Come in, don't be afraid. Are you afraid of exploding? As long as you are strangers, Alva is indifferent to you."

Arben followed Newmore into a tiny cubicle without windows. The walls were luminescent—the transparent plastic did not interfere with light. Arben noticed that not one object in the room cast a shadow. He swept the room with his eyes. An odd-looking installation bristling with wiring like an old boat covered with water weeds. An old cathode oscillograph on a tripod. A sink on the wall, water dripping from the tap. A towel on a hook. Arben could not see Alva anywhere.

"There he is, look!" Newmore nodded towards a corner.

Peering hard Arben discerned a strange half opaque object, which looked like a vertical cloud the size of a man.

"The usual cyber-model, only based on anti-matter," Newmore said, and gave Arben a nudge with his elbow. "Don't be afraid, he is surrounded by a protective field. You must meet your future double after all."

The cloud had a vague resemblance to a human figure. The arms he could only guess at were hanging listlessly down his sides, the head was hanging low. The wall could be seen through the body.

"Just an imitation of a human being, nothing more," Newmore explained. "A tribute to convention. I could endow Alva with any shape at all. But like this he will find it easier to mix with the crowd. Otherwise you will lose your freedom of movement."

Arben fancied that the cloud gave a shudder every time Newmore pronounced the word Alva. Was he imagining it? Arben was deeply disturbed.

"I did not imagine him like this," he said quietly.

"Oh, you think the double must resemble the original? He will when you enter into biological radio contact. In a month's time, when he launches forth into the world, so to speak, you will be as alike as two peas in a pod."

"But he is transparent!"

"Small matter. I'll cover him with an opaque film. And I'll give him a suit of the best cut—but that of course will be a mere light effect. Or better still I shall give him the clothes you wear—beginning with this jacket and ending with crumpled pants. Let you be doubles in everything!"

"How fast can Alva move?"

"At any velocity at all. Without, of course, surpassing Einstein's light constant. It would be nothing to him to overtake a car or an airplane."

"If he overtakes a car in the street, he will attract general attention," Arben said with a worried air.

"Smart of you!" Newmore slapped Arben on the shoulder approvingly. "I have already thought about it. We shall limit your brother's speed, so that he should not stand out in the street. Would three miles an hour be enough, what do you think?"

"Too much," Arben answered curtly. He did not like the word "brother" at all. A deadly

brother was not such an enviable acquisition. But what could you do? Alva was the other side of the medal, and Newmore's proposition was extremely tempting.

"I can't put too low a speed limit on him either. Because the same limit will be automatically applicable to you... Another thing I've taken care of is that Alva will move his legs human fashion."

"What if he suddenly soars up and moves his legs gliding above the pavement or even above the roofs?"

"You are a well of wisdom, really and truly," Newmore said with admiration. "To avoid that I shall have vacuum pads attached to Alva's soles. Let him not break away from our sinful earth. I have a new pair of such pads, the gift of Captain Lers. An experimental sample of your beloved Western, incidentally. Good ones, too, bear a load of a metric ton, and themselves weigh less than a quarter of an ounce."

"Each?"

"Both. A first rate gadget!"

There was a pause.

"Look at him well now," Newmore broke it. "You won't see Alva again, and if you do, it will be curtains for you."

Arben had anyway been staring at the remarkable cloud. He now gave Newmore a glance, but the physicist said nothing more.

In all the time they were there, the human-shaped cloud did not change its outline.

"Why do you say I won't see Alva again?" Arben asked when they were back in the labora-

tory. "For a whole month I will be, as you put it, teaching him. Though you did not particularise what the procedure will be."

"Or rather you did not understand my explanations."

"Perhaps I didn't," Arben agreed. "But how can it be that a teacher and pupil do not see each other?"

"It is enough for Alva that you should be within the radius of twenty miles, that is, that you shouldn't leave the city. As soon as I switch Alva's receiver to your resonance, engineer Arben will become a powerful radio station as far as he is concerned, or, to be precise, a colony of cell-stations, each yelling its head off on its own wavelength."

Arben looked into the mirror surface of a biostat they were passing. In it he saw a face with broad cheekbones and a cleft chin. The eyes were blinking in bewilderment. "A colony of radio stations indeed," Arben thought turning away from his reflection.

"Your brother will have no difficulty in absorbing information coded in the cells," Newmore said lighting up another cigarette.

"And what shall I be doing meanwhile?"

"You will be going about your own affairs peacefully. Peacefully is not just a figure of speech—you will feel more at peace than ever before. As soon as Alva is switched on, you will feel as though you have cast a heavy burden off your shoulders. Gradually Alva will relieve you of your nervous strain. Did you have a good look at yourself in the mirror? You look like the death."

“Then why did you have to get my agreement? You could do it all without it.”

“Here you are mistaken. It is very important for me that you should offer no inner resistance—it may distort the process of absorbing information.”

They had come to the door.

“What I shall do is to split your personality, as it were,” Newmore said in parting. “The better part will be yours. The worse is projected on Alva. He will be the carrier of your irascibility, your neurotic outbursts, your flashes of unaccountable anger—anyway, you know yourself well enough, I don’t have to spell it out for you. All that you want to get rid of will become Alva’s. And you will be able to fully enjoy life. You will fall asleep as soon as your head touches the pillow, your sleep will be deep and untroubled. Your glance, the conductor and reflection of your integral will, will acquire hypnotic properties. People will be glad to obey you and do your bidding. But this bliss will have to be paid for. You will enjoy life, while Alva, your copy, deaf, blind, deprived of all senses, will dash about the city, searching for you, his antipode. Luckily, when Alva takes final shape and becomes externally a copy of you, his protective field will become more powerful—this is within my powers. So the radio signals sent off by you, will just barely penetrate through that magnetic armour. You’d be able to live in peace and fear nothing. But the moment you break your life’s rhythm, become excited or develop a passion for something, the intensity of

the signals radiated by your cells will grow and Alva will be able to catch them more easily. Then he will locate you sooner—you must see that for yourself.”

“It’s late, I must go,” said Arben.

“One more thing,” Newmore said detaining his hand after their handshake. “It is quite likely that when Alva is put at large and starts roaming the city, he will run into your acquaintances—for they, too, will be a bait for him, since each of them receives and reflects your biowaves, like the Moon reflects the sun’s rays.”

“So they too...”

“No, no,” Newmore interrupted. “A meeting with Alva entails no danger for them—he will be attuned to you alone. Remember it.”

It was late at night. The moving walk, washed by the rain, glistened like a black mirror. The rare passers-by flashed past holding on to the wet rails. In the meagre light all of them huddled up in their raincoats seemed alike. Arben did not step onto the moving band but decided to walk as far as the underground station. He stepped carefully as though carrying a full vessel he was afraid to spill. He knew that Newmore had switched on the decoding apparatus as soon as he left and that at this particular moment his hereditary information was being fed into Alva’s memory. He squared his shoulders and fancied that he was already feeling much better than he had been feeling the last few days.

“It appears I have already started to divide into two poles, one with the plus and the

other with the minus sign,” he muttered to himself. Even the terrible memory that never left him alone seemed to have dimmed...

The Western’s employees were marvelling at the new Arben. Not that he had changed externally—only his stride had become firmer and he no longer stooped. While talking to them he averted his eyes, a mannerism he had not had before. His glance had become heavy and “penetrating” as defined by Miss Sheila. The story she told right and left, however, did not find much credence.

“Yesterday he came into the chief’s reception room,” she said. “It was going on one o’clock and the chief had told me to type out the report of the fourth section before lunchbreak. So Arben comes in and says ‘Good day’. I wished him good day without taking my hands off the keys of the typewriter so as to make him understand I was busy and in no mood for idle chatter. Anyway, you know I hate compliments.

“ ‘Could you do me a favour?’ Arben asks.

“ ‘I couldn’t,’ I reply.

“ ‘You see, I’d like you to go to the Low Temperatures Laboratory,’ he goes on as though I did not say anything, ‘and pick up the new journal from Alaine. He has had a parcel from the continent today.’

“ ‘Why don’t you go and pick it up yourself?’

“ ‘I can’t,’ he says. ‘I had a quarrel with him a month ago, and I feel awkward about it.’

“At that point I raised my head and he gave me a look... It was like getting scalded. I found

myself rising from my chair against my own will.

“ ‘What if Alaine does not give me the journal?’ I asked him stupidly.

“ ‘Oh he will,’ Arben said, smiling.

“So off I went to the Zero-shop as though somebody was dragging me there. And he shouted after me: ‘The journal is called *Nucleus and Space*, don’t forget. I’ll expect you back in ten minutes.’

“And what d’you think? It all happened exactly as Arben said,” Sheila wound up her story, her pretty eyes rounded significantly.

But most listeners were sceptically disposed. All physicists, and not only physicists either, knew that a young programme operator Charlie Macgown who had recently come to work in the Low Temperatures Laboratory, the Zero-shop, as it was locally known, seemed to have struck Miss Sheila’s fancy. So no mysterious magnetic force was required to send her scampering there, her chief’s assignment forgotten. Arben had nothing to do with it.

Arben was working well. On his own, without anybody’s help he made calculations that the ionic *Universal* computer had got bogged in. Then he built in his section an analogous device for which the client, the Defence Ministry, had been waiting more than a year. The chief himself had praised Arben’s department. The old man Wilmerton was so impressed that he gave Arben a bonus of three months’ salary.

Not one person knew that Arben was subject to attacks of terror, that he lived like a recluse (he had not been one to hobnob with his col-

leagues previously either), and that he had covered the walls of his room with cheap plastic.

Having parted with Linda after the concert of electronic music, Arben arrived home in a state bordering on panic. Linda couldn't have been mistaken. That meant she had seen Alva. So Newmore had completed the work, and Alva was at large. What was he to do? How was he to avoid meeting his other pole? To stay cooped up in his room? To cover the walls of his laboratory with ionised plastic? But how was he to explain its purpose? His refusal to move into a larger and better flat that corresponded to his new status of department head had caused enough talk already. But Arben felt safer in his old room.

Back home Arben switched off the videophone. He would feel calmer if he avoided talking over it. And calm was what Newmore advised.

He slept very well now. He tried to keep indoors as much as possible and so far Alva did not track him down once except for that story Linda had told him.

Still, it was not that blissful existence, with nerves as strong as steel cables, which Arben had visualised. One day, immersed in his thoughts he switched on the videophone mechanically. The screen lit up at once. Somebody was trying to contact him. Several moments later Linda's face appeared on the screen.

"Arbie, I've been calling you every day and there's been no answer. Has anything happened?"

"I've been busy," Arben answered reluctant-

ly. These days he was mainly preoccupied with protecting his inner calm.

“Why didn’t you come when we agreed?”

“I couldn’t.”

“Were you ill?”

Arben shook his head.

“It’s such a long time since we saw each other...”

Arben’s heart was torn by an inner struggle between his desire to discard from his life everything that could disrupt his calm and the longing to live like he had used to. It seemed to him that Alva had been roaming the city not for mere seven days but for an eternity. Even if Arben managed to stay alive a long time yet, what was the use of such a life?

“Forgive me, Lindie, it’s not my fault.”

“Oh, it doesn’t matter. Tell me, Arbie, where did you go when we parted that evening after the concert?”

“Home, where else?”

“Are you sure? It’s very important.”

“I went down into the underground, entered a carriage and went home.”

“You are ill, Arbie.”

“Why? What makes you think so?”

“You are seriously ill, and you’re not aware of it yourself.”

“What am I ill with, Doctor Lindie?”

“You ... you walk in your sleep,” Linda blurted out.

“Think up another one. I sleep better than ever before and I am very comfortable in my own bed.”

“This is no joking matter, Arbie.”

Linda drew her face nearer to the screen and Arben saw the mascaraed eyelashes tremble visibly.

“That evening... You only thought that you took the train... In actual fact, you followed me up the stairs...”

“I did?”

“You did not know anything, you seemed to be asleep...”

Now Arben understood.

“And what did I do?” he asked harshly.

“I stopped on the staircase. You caught up with me.”

“Did I touch you?”

“You saw nothing, though your eyes were open. You almost walked through me.”

“Well?”

“I moved aside and you walked past...”

“Did I go to your room?”

“No,” Linda whispered.

“Where did I go then?”

“I don’t know.”

“Didn’t you see?”

“I probably fainted for a moment... A few moments. When I came to you had disappeared. As though you had walked through a wall. Probably you had gone down the stairs and walked out.”

“A curious dream,” Arben said with a forced smile.

“It wasn’t a dream! At first I thought you wanted to play a trick. But then it became all clear to me—you are ill. I could not sleep all night. I called you, but your videophone did not answer... You did not come the next

day... And you know nobody can get into the Western unless there is a previous appointment. It's easier getting into paradise. I haven't seen you so long. I nearly burnt down my screen I tried so hard to get through to you... And then there is another odd thing. Why did you have to go to the concert in interplanetary boots as though you were off on a space journey? The funny thing I had not noticed it in the park, only when you caught up with me on the staircase. Why the weightlessness boots, pray? And weren't you odd? Come, let's go," she concluded.

"Where to?"

"I know a doctor—he lives near the Haven."

"No, Linda."

"Don't refuse! You must!"

"I don't need a doctor."

"What if this thing happens again?"

"Doctor won't help."

"Don't be a chicken, Arben!"

She was saying it to a man with steel cables for nerves! Arben smiled.

"Let's meet and discuss it all then," Linda offered.

"Next week perhaps," Arben said hesitantly.

"No, now, at once. We must have a talk."

"Well, we are talking."

"It's not the same thing. Well?"

"All right," Arben suddenly said, quite unexpectedly for himself.

He ran the length of the corridor, passed the guard's lodge and ran out into the street. Cars were few and far between at this hour of night.

"At last!" Linda said tremulously.

Arben felt a hot wave hit his heart.

"I caught a car going this way," he said.

"It has been a terrible week."

"Let's go and sit down."

"Why are you looking round? There is nobody here but ourselves."

They walked slowly towards their arbour.

"Have you been here long?"

"Twenty minutes perhaps. I'm chilled to the bone."

Arben put his arm round her shoulders tenderly.

"When I saw you on that staircase, Arbie, I was frightened out of my wits..."

Arben had been wondering how to tell Linda about his decision. He had to part with her, and the sooner the better. That was what he had come to do.

"Linda..."

"Yes, darling?"

"We shall have to stop seeing each other."

She stopped in her tracks as though running into a wall and pulled out of his embrace.

"I see... So you..."

"You don't see anything at all, Lindie," Arben said with despair in his voice and looked round again.

This wooded corner of the park, which few people wandered into even in daytime was now quite deserted. Arben fancied he saw something gleam white in front. He must run! But what's the point—Alva will catch up with him in no time. Arben's muscles tensed with fear. Oh, it was a birch-tree gleaming

white. Arben heaved a sigh of relief.

He took Linda's hand. The girl followed him listlessly.

There was a narrow crescent moon in the sky. Arben stepped on the lacework shadow cast by the harbour wall. They sat down on the bench damp from the dew.

"Stop talking in riddles," Linda said wearily. "I have courage enough to hear the truth. What is it? Another woman?"

"You are my only woman," said Arben shaking his head.

"Is it true?" Linda asked impulsively.

But Arben seemed sincerity itself.

"It is true," she repeated warmly. "Then why must we part? Because you are ill, is it that?"

Arben did not answer. Taking his silence to signify admission, Linda went on:

"Silly boy! I noticed it long ago, more than a month ago, only I could not understand what it meant. At first I attributed it all to your strange ways, then I thought you were pulling my leg. It was only that night, after the concert that I realised you were seriously ill and did not know about it." The girl put up her palm to a ray of the moonlight as though trying to catch it. "Never mind, we shall think of something, Arbie. You don't look bad at all. You have even got colour in your cheeks. Arbie, stop it!" she suddenly cried out.

"What do you mean?"

"Stop looking round!"

Arben was about to say something, but Linda forestalled him:

"Make an effort. Resolve not to look round. You must keep your nerves under control," she said importantly. "You'll get well, I have no doubt about it. They cure all sorts of nervous disorders these days. I heard from a physicist who also goes in for biology..."

"D'you mean Newmore?"

"Yes," Linda admitted after a pause. "He told me an amazing thing. Only I did not understand it all. The idea is he invented a device that can absorb nervous ailments like a sponge."

"Is that so?" Arben asked in amazement. "What else did he tell you?"

"See you don't mention it to him," Linda caught herself up. "He asked me not to breathe a word of it... I think he was a bit high and said more than he intended. But he has the highest opinion of you... Promise you won't tell him."

"I won't," Arben assured her.

"Newmore's fantasy is better than Hoffmann's. He said for instance that as this sponge absorbs a man's ailments, it becomes more and more like him. And in the end they are alike as two peas in a pod. What nonsense!"

"Yes," Arben drawled. "And what happens to the sponge?"

"It begins to live a life of its own, a reflection, as it were, of the life of its host. It's a kind of spectre, which yearns to find its other half and merge into one. But the man must avoid such a meeting."

"Why?"

"It bodes no good for him. I don't quite know how, because Newm could hardly get

his words out by then—I've never seen him so drunk before. What was it he said would happen?"

"Annihilation?" Arben prompted.

"That's right!" Linda exclaimed.

"Interesting. And has he already staged such an experiment?"

"No."

"Why?"

"He said he couldn't find any volunteers. But he also said he was sure he'd find somebody in our age of nervous strain. He asked me if I'd like to try it," Linda said with a laugh. "Although he wasn't sure I'd do."

"Well?"

"I refused of course. To risk my life for some stupid idea of his? Nothing doing!"

"Stupid idea..." Arben repeated slowly. "And what if a person has no other way out? If he is prepared to do anything to get rid of the burden of memories..."

"Even at the risk to his life?"

"Yes, even at the risk to his life!"

"Why do you take it so much to heart?" Linda asked in surprise. "And what if Newmore makes a mistake? I think he was going to first try it on a dog."

They were silent for a while.

"It looks to me as though you've taken Newmore's fancy in all seriousness," Linda finally broke the silence.

"And why not?"

"One can't run away from memories and troubles," Linda said pensively. "And our troubles are our illnesses. Can one run away

from himself?"

When they walked out of the harbour, the crescent moon was dipping towards the horizon.

"Promise you'll consult a doctor," Linda demanded.

Arben nodded wordlessly.

He was terribly uneasy. It took him a tremendous effort of will to stop himself from peering over his shoulder. He ought not to have come here. Despite his strong nerves he had lost his inner balance, and it was quite possible that Alva, the concentration of his former troubles and griefs, was stalking him already. Well, it could not be helped.

Arben had not realised parting with Linda would be so painful. He had become strongly attached to her. Still, he had to sever this last attachment so as to comply with Newmore's terms. But fancy Newmore blabbing it all out to Linda! He would never have believed him capable of it. On the other hand, what did it matter? His telling Linda about his invention changed nothing essentially. Sooner or later the ghostly Alva would become Polichinelle's secret. Newmore would patent his discovery and become a rich man. He would have swarms of rich clients, while the common man would never be able to afford it. Newmore would advertise his invention temptingly—he had a good head for business. Nor was he such a bad chap generally—after all he took no money from Arben. But why wouldn't he look Arben in the eye when reasoning with him? Was Arben perhaps cast for the part of the guinea pig? But no, he was his friend, wasn't he?

The couple was lucky in catching a free taxi the moment they emerged from the park.

The city was troubled, it seemed. Some of the windows were still alight. Behind them were probably people robbed of sleep by their troubles. Arben leaned against the soft back cushion with the sense of superiority. No, he was not like everybody else. Very well, he went in fear of Alva, but he had no other troubles in the world. Wasn't it what each and every person dreamed about?

"God, how late it is!" muttered Linda when the automatic driver drew up at her house.

She jumped out of the car, said a hurried "Goodbye" and dived into her entrance. At that very moment Arben noticed a figure emerging from round the corner. The man was walking briskly, his head lowered and his steps noiseless. When he entered the circle of light cast by the street lamp Arben recognised himself, or, rather, Alva.

"A good thing Linda is in the house already," he thought, but the next moment he recalled that oaken doors and stone walls presented no obstacle to Alva.

Numb all over, he prepared for the worst. But Alva disregarded the car. He was making for Linda's house.

"Stop!" Arben commanded mentally. Alva's walk slowed down, and by the door he stopped. Then he slowly turned towards the car. Arben and Alva were separated by a mere dozen steps.

"Let's go!" Arben said to the driver, coming out of his trance.

But the car remained stationary.

Alva, meantime, was approaching at an increasing speed.

"Come on, you!" yelled Arben and hit the driving panel with his fist

The automatic driver, a flat box with signal lamps, did not react.

Another two or three leaps...

Should he jump out? Arben threw himself against the car door and the pain in his shoulder brought him to his senses. But of course. He must feed some money into the meter. He grabbed a handful in his pocket and pushed several coins into the slot. The relay gave a click, and the lamp flashed on, which meant the driver was awaiting orders.

"Ahead, as fast as you can go!" Arben breathed. The car leapt forward so precipitately that he was pressed back into his seat.

The car dashed along the street, taking corners as though by a miracle and emerged onto the main thoroughfare.

Arben had seen Alva try to pursue the car, but he only succeeded in floating in the air, his legs jerking like those of a puppet, almost without touching the pavement. "The speed limit," Arben recalled. "He can only move at three miles per hour." The jerking figure was left behind the turn.

"Why does he follow Linda? Of course, he can do no harm to her, but it's me he is after, damn him! Why Linda then?"

The furious drive soothed him. "What luck Newmore gave him that speed limit! And what luck I was inside a car," he thought.

Arben no longer went on foot anywhere, though he had used to be quite fond of this antiquated exercise. Even if it was a matter of a hundred metres, he went by car. He had got himself a flat-nosed Bessaine.

His colleagues were amazed to watch his speedy rise at the Western. And they tried to avoid his odd gaze. Rumours went about that that gaze compelled a person to comply with any request the chief engineer might make. Since there was no explaining this strange phenomenon, all they could do was make wild conjectures or shrug their shoulders sceptically. But even the sceptics were wary in their dealing with the new department head. His spectacular advancement alone commanded respect.

Arben had not yet become rich, but he had enough money now to buy himself a car. Moreover, he had it made to his own design. Its strangest feature was its angularity—the car had no curves and consisted of flat surfaces placed at right angles to each other. Nothing of the fashionable spherical shape. The car's body represented a geometrically rectilinear **parallelepiped**.

Car firm employees were intrigued by so extraordinary an order, but contained their curiosity. The wish of the customer was law, especially of a customer willing to spend a lot of money on his whims. (What else could it be if not a whim?)

The order was soon filled, and Arben was quite pleased as he examined the cubic cabin and verified whether the surfaces did not have any curvatures.

“What kind of upholstery would you like?” the design technician enquired.

“Makes no difference.”

“Just now the fashionable colour is cherry-red.”

“Excellent.”

“As for the inner surface of the cabin...” The technician continued.

“Leave that to me,” Arben interrupted.

Strange as it may seem, Arben’s colleagues displayed no envy in discussing his dizzy career.

“He’s not a bad chap really,” said many of those who could not stand the sight of him a mere month ago.

Formerly inordinately irritable and prone to fly into rages, now he was remarkably even-tempered and good-natured. This was noted by everyone. It somehow came about that instead of shunning him as before, people began to come to him with all sorts of requests, often quite irrelevant to the problems which faced the department and the Western as a whole.

Externally he was the very same Arben, only he looked healthier and had a better complexion, but internally he seemed to be an entirely new person, kind and warm-hearted.

If people now saw Arben in a new light, he saw his colleagues in a new light as well.

Miss Sheila whom he used to detest (and the feeling was reciprocated) was no longer a bad-tempered bitch, but a fading woman with tragic folds in the corners of her mouth, which told Arben much more than her flamboyant beauty.

Each person with his personal griefs and joys became dear to Arben, and he was willing to help each and every one, and did actually help them to the best of his ability.

Significantly, the chief, who was a self-avowed hater of all slobberers, as he put it, was, like everybody else, well disposed towards the new Arben; for his part, Arben had a different vision of his boss, a self-made man, ruthless, iron-willed and lucky.

What was he, this minion of fortune, this lucky one? Essentially, he was a miserable old man oppressed by the enormous responsibility resting on his shoulders. To go perpetually in fear of making a false step—was that happiness? Arben clearly discerned panic behind the boss's peremptory tone. Should the company's dividends shrink, then the real bosses of the Western, whom the mere mortals did not even know by name, as well as the competitors would make short work of Old Wilnerton, like a pack of wolves tearing to pieces a wounded kinsman.

The formidable Wilnerton became as clear and understandable to Arben as old Don Flesh, the veteran astronaut kept on as a guard for some special services to the company, while all the other guards had been replaced by photoelement robots.

One day Arben ran into the laboratory assistant Grino.

"I've been looking for you," Arben said. "I want you to spend a night on duty by the new installation..."

The young man looked startled.

“There’s nothing to be afraid of,” Arben reassured him, misinterpreting his expression. “I did not understand much about these installations at your age either. But for this particular job no special qualifications are needed. Let me explain it to you... Why, what’s wrong?”

“I can’t stay on for the night today,” Grino blurted out desperately. And immediately recalled a paragraph in the Western’s Rules which he had been given to read and sign while he was screened for employment in a secret enterprise. “Failure to obey the orders of a superior involves...”

“What is the matter?”

“It’s a family matter... I told you...”

Arben frowned. A shadow of recollection passed over his face. He tried to remember but could not.

“Very well, Grino,” he finally said. “You may go home.”

“And, when do I report?”

“When you can.”

“You mean you are sacking me?”

Arben shrugged his shoulders.

“I have no intention of sacking you.”

“But who will stay for the night duty?”

“Myself,” said Arben.

Why shouldn’t he, indeed, spend the night here as of old? The young chap seemed to be having a tough time. What the old Arben would have found outrageous, the new one took in his stride.

Arben’s mathematical calculations were now faultless, and his cool and ingenious mind became proverbial. This was enough reason

for the chief to put such infinite trust in him. Of course there were some who hinted at undue influence, but is there anyone without enemies in this world?

There were quite a few who were convinced of Arben's mysterious powers in all seriousness. Miss Sheila went as far as to shade her eyes with her hand whenever she met Arben, even though she did it with a smile, as though in jest.

Arben had a consciousness of superhuman abilities and found great enjoyment in it. Everything he tackled turned out well. When conducting a fine experiment he was able at once to get to the core of it, leaving the details to his subordinates.

Without much effort he became the Western's champion in swimming, though he had formerly been quite indifferent to water, and detested athletics in general. And he obtained his title without any previous training. He just wandered into the sports complex once during a swimming contest and decided to compete.

His chief forgave him any oddities and whims—including the fact that he had papered the walls of his department with colourless plastic.

Arben had switched off the videophone in his room for good, and Linda could no longer get through to him. So nothing marred his calm.

“Why, hello!” cried Newmore with unfeigned surprise: there was cause enough for this surprise

since he had been doing everything in his power to avoid such a meeting.

“Hello,” Arben said with a wry smile.

Arben had been waiting for Newmore in his car for more than four hours. Something had gone wrong with the heating system, and he had been chilled through, but he did not dare to get out, for Alva had become devilishly sensitive of late. If only he could make himself a plastic suit!

The day before his chief mentioned that the physicist Newmore could be seen at this house known as the Brains Centre which meant the higher-ups were interested in some discovery of his.

Previously all Arben's efforts to see Newmore failed. It was as though the physicist was surrounded by a tall wall. Nobody knew his new address and nobody knew where he could be found.

What would his colleagues have said if they saw the self-assured Arben, chilled to the bone, waiting in his car to waylay Newmore? From time to time Arben looked round. So far Alva had not made his appearance.

Arben nearly missed Newmore whose spherical Molek floated up noiselessly to the entrance of the Brains Centre. Only when the car stopped with a hissing sound, Arben came to with a start, jumped out and emerged from behind a column just as Newmore opened the armour-plated door of the Centre.

The expression of Arben's face told Newmore he was in for a serious talk, but he tried to avoid it all the same.

“I have urgent business inside. Perhaps we’ll make a date for a more convenient time?”

“I don’t know when that time will be. I cannot wait any longer. And it’s impossible to get hold of you.”

“Very well,” Newmore agreed. “Perhaps I can afford to give you several minutes.” He glanced at his watch worriedly. “But not here, I think.”

Arben stood by, determined to bodily detain Newmore should he try to slip away under any pretext.

“There’s a nice little cafe a block away...” said the physicist taking Arben’s arm.

Arben walked quickly, to get into a sheltered place as soon as possible.

“How did you find me?” Newmore asked when they took their seats.

“I was passing by,” Arben said with forced casualness, “and I saw you getting out of the car.”

Newmore glanced at his face pinched with cold but refrained from comment.

“Has Alva been pestering you badly?”

“That is what I wanted to talk to you about,” Arben said.

“Remember our agreement? The experiment must last a year, more if you like, but not less. Only two months have passed.”

“Today is the sixty-fourth day.”

“Makes no difference. You must understand I have invested all my money into this venture. If I interrupt the experiment it will all be lost. Why, is life so very bad? You have become a superman for nothing.”

“Alva is behaving very strangely. For one thing, to begin with he paid more attention to Linda than to me, his biological other half. Can you explain it?”

“Indeed?” Newmore asked with interest, putting down his glass.

Arben told him. Newmore asked several questions, then fell to thinking.

“Can Alva be developing differently than I expected?” he said as though to himself. “Oh, I got it!” He banged his fist on the table so hard that the bottle jumped. “It must be because she is thinking of you all the time. More than you think of yourself.”

Arben looked at him with alarm.

“Did Linda tell you anything?” Newmore suddenly asked.

“What about?”

“About me, about Alva?”

“We haven’t been seeing each other.”

“And before?”

“Why, does Linda know?”

“I am asking questions!” Newmore barked.

“We never discussed it,” said Arben hesitantly.

“Very well,” Newmore said. He seemed to have come to a decision. “What do you want from me?”

“I want you to make things as they were.”

Newmore maintained a stony silence.

“I agree to have my former failings back,” Arben said with forced jocularly.

“And how do you picture it, I’d like to know?” Newmore said in icy tones.

“Kill him.”

“You speak like a child, ” Newmore said

with a shrug. "I explained to you when we signed the contract that to destroy Alva after you've become doubles is tantamount to destroying half of you, burning half of your every cell."

Arben looked crestfallen.

"Just be careful, and everything will be all right," Newmore continued.

"Alva is pursuing me day and night. This persecution makes my life hell."

"Nobody forced you to agree."

"I did not imagine it would be like this. And then you said..."

Newmore glanced at his watch.

"Can't you erase the information and feed it back to me, Newm?" Arben pleaded. "I'll pay you for any losses you incur. Any sum you name. I'll work all my life..."

"Alva will perish then," Newmore said, shaking his head.

"You'll make another."

"I'll never make another Alva."

"So you won't?"

"I can't!" Newmore made to rise.

"So that's how it is!" Arben grew purple with fury. "I'll show you up for what you are then, you bastard. Your guinea pig will cost you a great deal—more than a dog would have!"

"Don't shout!" Newmore hissed.

People were looking.

"I will shout! Why not? I'm cool-tempered enough the rest of the time. My nerves are like steel cables!"

"Don't be a fool. You'll only attract Alva."

"Newm, please, in the name of our friendship... Why must you build your palace on my bones?"

"You're crazy! We'll talk when you regain your senses," said Newmore and rose to go.

Arben leapt like a leopard, overturning the table, and seized him by the throat. Glass was smashed, women began to scream. A waiter dashed across the cafe, a smile frozen on his lips. With an effort Newmore managed to unclasp Arben's hands, but he was not equal to a long tussle with Arben though he knew judo quite well. A minute later he was lying on the floor, Arben pinning him down with his knee.

"Will you do it?" he asked paying no attention to the crowd gathered around them.

"Let me go!" Newmore wheezed.

"I'll strangle you like a kitten. Thanks to you I have enough strength for that."

"Call the police!" A hysterical voice screamed. "He will kill him. Help the man."

But no one dared to intercede for the prone Newmore. Arben's athletic figure seemed to emanate a force that inspired fear. Or was that the glance Arben gave the spectators? People in front backed away from it, treading on the toes of those in the back row.

And at once, as though at a word of command, the crowd began to thin. Everybody went back to his place, avoiding one another's eyes.

"See? That's how much I owe you. Well?" Arben made to seize his opponent by the throat again. "You've had enough time to make your decision."

“Okay,” Newmore unexpectedly said. “To hell with you. I’ll return you to your former state. Alva will have to be destroyed.”

“How do I know you’ll keep your word?” Arben asked. He raised his eyes at the man who had just entered and come closer to observe the tableau. The man gasped and shrank back, knocking down a chair.

“You will have my word of honour.”

“That’s not enough.”

“Let me get up and let’s discuss it like civilised people,” Newmore begged. “I’m in your hands anyway.”

Arben paid the check to the frightened waiter and they walked out.

“Here!” Arben pointed to a corner of the hall.

“We can begin tomorrow,” said Newmore looking away from his companion.

“That’s more to the point.”

“Is your car insulated with plastic?”

“Of course. I’d make plastic clothes too if I could. Then I wouldn’t have to bother you.”

“So this is called bothering,” Newmore said thoughtfully fingering a huge bruise on his neck.

“Don’t split hairs. You’ve driven me to extreme measures yourself.”

“Better come to the Institute tomorrow.”

“As though one could get inside!”

“I’ll give you a pass.”

Newmore brought out a pad, wrote several words in it, tore the sheet out and gave it to Arben. The latter read the text carefully and gave a nod of satisfaction. In the corner

of the sheet was a monogram which Arben knew to open nearly all doors for the bearer.

“Don’t drink anything today,” said Newmore watching Arben fold the sheet of paper. “Nor tomorrow morning.”

“Why, not even water?”

“I mean no alcohol.”

“I haven’t tasted whiskey for two months. I practically forgot the smell.”

“I recall you used to be quite fond of a drink.”

“The need has disappeared. Generally, I have no desires. I do things by an effort of will. Otherwise I vegetate like this here palm.” And he patted the rough bark of the tree.

“But you’ve become as strong as an ox.”

“What’s the use? I want to live like everybody else, to have joys and griefs as everybody. And I feel like a fish in a jar, a wonder fish which is stared at by the curious. At times I imagine my blood is as cold as a fish’s. Oh, I’ll be happy to be rid of this nightmare! You know,” Arben said with a trusting smile, “so many things have accumulated in these two months. I haven’t seen Linda for ages...”

“You’ll see her now,” Newmore said with an enigmatic look.

“Let bygones be bygones, Newm,” said Arben. “I can understand you getting carried away with an experiment. I get that way myself when I conduct one. I do not spare myself or others. As for the losses... Whatever I have is yours.”

“I have not been carried away,” Newmore said staring fixedly ahead. “Through your

fault my experiment is ruined.”

“Experiment...” Arben repeated. “I know a thing or two about that experiment now.”

“I did not conceal anything from you. I laid my cards on the table. You could have refused.”

“You did not lay all your cards on the table, Newmore,” Arben said shaking his head. “You told Linda more than you told me.”

Newmore’s face froze. Arben realised he had spoken out of turn.

“May I go now?” asked Newmore, pushing aside a palm frond.

“Till tomorrow,” said Arben moving out of his way. “Wait a minute though! You’re not going to do a bunk, are you? To the other side of the ocean, say?”

“Don’t be afraid, I won’t,” said Newmore, and Arben believed him.

Arben came out of the cafe dizzy with joy. He strode to his car without turning once. He even felt like walking with deliberate slowness to test his fate.

The car started readily. Arben switched off the automatic driver and sat down behind the steering wheel. He felt full of buoyant energy. Tomorrow the screen which had been separating him from all other people would begin to melt.

Arben was so engrossed in his thoughts that he drove without really looking. This however did not endanger any lives, since his role as a driver was reduced, in practical terms, to turning half-dummy steering wheel. Gone was the time when man drove a car him-

self. Now a locator tested the road ahead for obstacles and even the chance of obstacles—like a car appearing out of a side-street, or a cat crossing the street.

True, Arben had switched off the automatic driver, but that only meant that the car had not received a final destination order and that Arben could choose the street to drive along. The speed and the track of the car were determined by electronic devices. This ensured safety in the streets. Even if Arben wished so, he could not run over a stray dog—the electronic device would make the car swerve or stop if there were any obstacle, stationary or moving. No matter that the car owner was in a hurry—the task of the infra-eye was to avert accidents.

Arben drove along one street after another, past new domed buildings which seemed to be hovering in weightlessness and past old-time stone box houses. But he did not see anything. He was full of his conversation with Newmore, full of triumphant joy in his victory, which was won at a high cost. He realised Newmore could not but feel sore about destroying his Alva in whom he had invested so much money and brain energy. When Arben took the information back, Alva would cease to exist, that was inevitable. It was a shame, really. But why must Arben risk his life for Newmore's sake? If all was said and done, Newmore had tricked him into agreeing. This was not decent of him. Let him pay for it now.

Arben braked before the big AFA department store. The working day was nearing its end and the sidewalks were crowded. Arben

did not dare to leave the car—Alva could approach him unnoticed in a crowd. It was safer in an open spot.

His fears returned to Arben. He fancied each passer-by was Alva. It would be stupid to die now, on the eve of liberation. He only needed to make several steps, but each might prove fatal. He peered at the passers-by. There was a man of middle age burdened with parcels, on top of a fat briefcase. His eyes were careworn. He probably did not think much of his own life. How surprised would he be to find that the healthy handsome man sitting in a luxurious car would be only too glad to exchange places with him.

Ten steps—like a board thrown across a precipice. Suddenly Arben saw a familiar face. Altogether, his memory had become faultless in the last two months. He could easily remember details of a happening that occurred twenty years before. A face casually seen floated to the surface of his mind and became as clear as embossing on an old coin cleaned with acid by a skilful numismatist. This, however, was only true as regards pleasant memories. The unpleasant ones seemed to have dissolved.

The girl walked past, her eyes passing over the car indifferently. Arben pounded on the window screen. She turned round. Was the man calling her? She did not understand... She shrugged her shoulders and turned away, but at the last second the imploring look on the face of the man sitting behind the steering wheel caught her attention. She came up to the car. On her sleeve was the AFA sign. Last

year Linda had pointed the girl out to Arben, and now he recognised her at once. She worked with Linda.

The girl regarded his frantic signs with puzzlement. The man was a complete stranger to her.

"Do you work at the perfume department?" Arben shouted through the thick glass.

The girl nodded.

"Do you know Linda Lawn?"

She pointed to her ears and to the car door, suggesting that he open it.

"Linda!" Arben shouted again pretending not to notice her signs.

This time the girl caught the name and nodded. Would she tell her he was waiting here for her?

"Ours is a strict boss," he managed to lip-read. "He won't let her off."

"Just tell her I am here," he asked.

"What name shall I give her?" the girl asked, her eyes alive with curiosity.

"Tell her—a slave."

"What?" She thought she had misheard.

Arben repeated. The girl turned back to the department store. Before stepping on the moving band that would carry her inside the store, she turned back to gaze at the odd man.

Arben's heart was beating wildly—a sensation he had forgotten in the last few weeks. Before long Linda walked out of the store. Her uniform cap was askew, revealing her auburn hair. She stared helplessly round. Then she saw Arben and quickly crossed over. She was obviously surprised to see him sitting in an expensive car. Arben opened the door, pulled

Linda in and quickly shut it again.

They exchanged a few desultory phrases as though they had only parted yesterday, while in actual fact...

"My friend said you must be cuckoo," Linda said with a smile.

"She may be right too," Arben answered seriously.

"I'm sorry," Linda said contritely. "I forgot. How do you feel?"

"Better. Much better."

Linda broke into a happy smile.

"So you've seen a doctor?" she said and continued without waiting for his affirmative.

"What treatment is he giving you?"

"This and that."

"Do you follow his orders?"

"Oh yes. Tomorrow, incidentally, the decisive course begins."

Arben was grateful to Linda for not asking too many questions. He had prepared some excuses for his long absence, but they proved unnecessary.

"Have you a lot to tell me?" Linda asked worriedly.

"Why? A stern boss?"

"How do you know? I don't think I ever complained..."

"I have many things to tell you. Can't they really manage a while without you?"

"I suppose they can," Linda said doubtfully. Arben pressed the starter.

"Where do you want to go?"

"Let's go outside town," Linda suggested. "Take a breath of fresh air."

"That's too far," Arben said shaking his head.

"Well, then drive wherever you want."

Arben felt guilty of neglecting Linda, and kept glancing at her chiselled profile lit up by neon advertisements. She sat deep in thought, her hand laid lightly on the steering wheel. Arben longed to press his cheek to her swarthy wrist.

"Gipsy," he said softly.

"Yes, darling," she responded tenderly.

"This evening is ours. We'll drive our fill, and then have supper somewhere. What would you say to the Italian restaurant? They have divine spaghetti there." Significantly he patted his side pocket.

"You seem to be flush with money, Arbie. Where did you get it? And whose is this car?"

"It's mine. Or rather ours."

"But you didn't use to..."

"Don't worry," Arben interrupted her. "I came by it through honest toil. In the last month I earned a pile." He had driven the car into the central thoroughfare and added as he gazed at the multicoloured domes. "In a measure it was connected with my illness."

"Insurance?" Linda asked.

"No. You see, this illness caused my mind to work better. And if you please the Western, they pay. Perhaps I shouldn't undergo any treatment, what d'you think?"

"Don't talk nonsense," Linda said sharply.

"It's a joke, Gipsy."

"It's cruel to joke like that."

Arben drove without thinking. The car

itself knew what to do. It seemed to be eating space.

"It's a good thing your course of treatment begins tomorrow. Never mind money. And toys like this one," Linda patted the cherry-red upholstery of the seat, "leave me cold. Only please don't disappear any more... Because if we don't see each other a long time you may again..."

"There is no need for us to part," Arben said slowly. "You only have to say so, and a certain good-for-nothing is prepared to lay his all at your feet..." Arben faltered, embarrassed by his own style. Linda came to his rescue bursting out laughing and turning it all into a joke.

They discussed their future at length that evening.

"Let's go away," said Arben. "Somewhere far away."

"To the coast," Linda murmured without opening her eyes.

"Yes, to the coast," Arben assented. "I'll find myself a job at a filling station as a mechanic or a repairsman."

Linda opened her eyes.

"You see, I'm not sure how the treatment will affect me," Arben explained in answer to her questioning glance.

Linda nodded understandingly.

The city beyond the car's windows seemed unreal, almost ghostly. One fancied it was an apparition, a vision which would disappear if one rubbed his eyes.

"We ought to be able to leave in a week's

time,” Arben said turning off the highroad into a long narrow street.

“I could go tomorrow. I’m so tired of all this...”

Linda broke off. There were two bitter creases at the corners of her mouth. Arben thought that her life was far from easy, though the girl had courage and never complained.

“I won’t manage tomorrow. There are things to be attended to,” said Arben.

“Having to do with your treatment?”

Arben nodded.

As if by agreement they never once mentioned Newmore’s name, and this pleased Arben. As for Linda she would be hard put to it to express her feelings in words. It was certainly an odd course of treatment. Just imagine—treatment which dimmed a man’s mental brilliance making him a humdrum, run-of-the-mill sort of person. Could genius itself be nothing but a mental aberration? What is it that raises a man of genius above the rest of the people? Not exactly these thoughts but their shadows flitted through Linda’s mind.

“I shall be terribly busy for several days,” said Arben fingering the sheet of paper in his breast pocket.

“Okay, we shall leave later. Towards spring.”

The car braked sharply as a bevy of children dashed out into the road just under its bumper. Of course their lives were not endangered for a second since the car’s speed and all impulses had been computed in advance as the car turned into the street.

“Tell me, do you ever think about me?”

Arben suddenly asked.

“Sometimes,” Linda answered with a smile.

“Often?”

“You don’t deserve being thought about often.”

“Please, try never to think about me...”
Arben said seriously.

“Modesty is of course a fine feature.”

“I am not joking. Do not think about me, do not remember our meetings... At least for a few days.”

“Why?” Linda cried amazed at the unusual request. “Why should you object to my thinking about you? Don’t you like it?”

“I can’t explain. Later... When we are together. Why do you laugh? Do I appear a crass idiot to you?”

“You do, rather. Please don’t be offended!”
She clung to Arben. “Simply I recalled a parable about a monkey. A magician said to a certain man, ‘Would you like me to give you back your youth and good looks?’ ‘I do,’ answered the man, who was old and bent. ‘For this you must fulfill one condition,’ said the wizard. ‘I agree to it beforehand.’ ‘Oh, it is a very easy condition. Simply for five minutes you must avoid thinking about a monkey. That is all. Those five minutes are the time required for your transformation.’ ”

“And what happened?”

“The wizard never fulfilled his promise. His condition could not be fulfilled.”

“And the man remained old and feeble?”

“That’s right.”

“No,” Arben said in a hollow voice, “we

cannot control our memories. It is easier to kill a man than to part him from his memories.” He glanced at his watch as though remembering an appointment.

“How time has been flying,” Linda said.

“Let’s go and eat somewhere.”

“I am not hungry.”

“Neither am I,” Arben confessed. “Well then, where shall I take you? To your department store?”

“Take me home. It’s late.”

Arben pressed a few buttons on the panel, switched on the automatic driver and leaned back on the cushion.

As they left the city centre behind, there was less lighting in the streets. You could barely guess at the bulks of the houses on the sides of the road. The only exception were brightly lit domes. The old windowless houses were leftovers of the time when people went in mortal fear of radiation whose level kept increasing. The square boxes of houses were extremely ugly, but somehow the city authorities just could not get round to pulling them down. There were less advertisements in this outlying district of the city.

“Remember that time you brought me home in a taxi?” Linda said when the car stopped. “Now you have a car of your own.”

Arben was staring into the darkness through the side window.

“Quite a sturdy little horse,” Linda said approvingly. “You know what I’d like, Arbie. When we start out for the coast in it, let it do its damndest. I want to try a really

dizzy speed. Okay?"

Arben nodded, his glance raking the street. It seemed to be quite empty. "This here lamp belongs in a museum," he thought looking at an old lamp that was swayed by the wind, the circle of light swinging back and forth. Long fallen leaves now were lit up, now disappeared in darkness again. It was quite cold and they were expecting snow any day.

"It's a remarkable car. I've never seen one like it," said Linda.

"Do you like it?" Arben asked, turning away from the window.

"Yes, very much. There's only one thing—why has it been lined with plastic inside?" Linda touched the uneven surface gleaming dully. "Look, it has risen in knobs here and there. One might think it was done by hand. And none too competently either."

"Yes, it's crude work," Arben agreed.

"Let's pull it off," Linda suggested with the gesture of one ripping off a label from a bottle.

"Wait. You haven't seen other cars of this type. Perhaps it's the latest fashion."

"It's unattractive all the same."

The car's headlights cast a bright sheaf of light ahead. Arben turned down the lighting, and the sheaf turned into a ray alighting wearily on old asphalt.

"I think I'll go," Linda said after a short pause and an expectant glance at Arben.

Arben opened the door and got out first.

"I'll see you to your door," he said.

"Good for you," Linda responded merrily.

"Much better than doing it on the sly."

“Oh that...” Arben mumbled and his brow darkened.

Linda's high heels tapped loudly. Arben walked beside her, trying to keep calm and not to hurry. He did not know what had impelled him to leave the safety of the car. The desire to be a few more minutes with Linda? Or the wish to feel a normal man again, one who need not flee and hide from his own desires. “To the door and back,” Arben said to himself.

Two huge shadows crossed the road and climbed the wall of the house. One was slender, the other manly and broadshouldered.

“Look, our shadows do not want to part,” Linda said softly, slowing her steps. Her eyes sparkled. “We shall go away, and they will stay here to be always together.”

“Good night,” Arben said when they found themselves on her doorstep.

“When shall I see you again?”

“I hope it will be soon.”

“I'll be waiting.”

“I'll call you.”

Linda waved her hand and entered the doorway.

Before Arben made three steps back to the car, a shadow separated from the wall. It seemed to have appeared from nothingness, and it moved cautiously and noiselessly. Only Alva could move like this, without causing the fallen leaves so much as to rustle, Alva, his second half, the concentration of his griefs, cares and fixations, a rare cloud of antiparticles that was at once part of Arben and his destructive opposite.

The figure approached slowly but inexorably, like fate itself. Arben, however, was not a fatalist. Now that he had at last met Alva he found in himself that calm for which he had striven so vainly and which Newmore had promised him when persuading him to agree to this unheard-of experiment. His brain worked clearly and efficiently, Alva's top speed was three miles per hour. This was good. But Arben could not exceed that speed limit either. That was bad. The worst thing however was that Alva had placed himself in a strategic position between Arben and the car and was cutting across.

That Alva was capable of executing a manoeuvre was unwelcome news. "It's as though he is on long distance control," flashed across Arben's mind.

His salvation was in the car lined with ionised plastic. But how was he to reach it?

Alva could catch up with him, even though their speed limits were identical. Before the experiment Newmore promised Arben safety, but he had deceived him. Yes, he had deceived him in the foulest manner.

They say that a drowning man recalls all of his life in the few seconds he has before death. No caleidoscopic picture of his life flashed before Arben's inner vision, however. His memory snatched out, like a searchlight, a conversation he had had with Newmore just before he and Alva were "turned in".

"To all practical intents and purposes," Newmore had said, "Alva holds no danger for you. With his maximum speed..."

“But mine will be the same!”

“Exactly!” Newmore laughed, showing his excellent even teeth. “After all you’re an engineer. Judge for yourself: *A* is following *B*. Both have the same speed. Will the pursuer ever catch up with his victim?”

Newmore’s argument sounded convincing. But even then Arben smelled a rat.

“You may be right if it happened in an open field. But in a city?”

“It makes no difference,” Newmore said. “You’ll run away from him along a street, that’s all. And not run away either, but just stroll along, and the distance between you will remain unchanged.”

“And in which direction shall I be ‘strolling along’, may I ask?”

“Whichever you like. You will have millions of opportunities. You may reach the walk and ride away on it. You may enter an underground station and take a train. You may, finally, reach your own flat which, by then will be lined with this plastic.” Newmore had indicated a fat roll of plastic. “It’s a pity you can’t make yourself a protective covering from it. Then there would have been nothing to discuss.”

This conversation flashed through Arben’s mind as he started walking away from Alva. The latter was still moving slowly, while Arben had put on a burst of speed to win time and distance. But when he tried to walk faster still he felt something like an elastic wave hit him in the chest and halt him. His own braking field was inexorably effective.

Engineer Arben could not be said to be at home in the science of mathematics. He left it to the "dry theoreticians", and proudly considered himself a practical man. This circumstance proved his undoing as regards Alva. Arben was not familiar with the theory of pursuit, which was developed by a nameless mathematician a hundred years ago and which found a new application in space flights. This theory held that if two points moved at the same speed and one was pursuing the other, the first was sure to catch up with the second. The only condition necessary was limited space in which they moved. This, of course, was a self-obvious condition, for otherwise the pursued object could move away from the pursuer along a straight line leading into infinity. It was a different proposition if the pursuit took place within an enclosed territory. The victim, not allowed to leave the limits of the territory, would sooner or later have to execute a curve. With each such curve, the pursuer, changing his own course correspondingly, will find himself nearer and nearer his prey. This occurred through his cutting of corners, which was inevitable once the pursued began to weave his way right and left. In other words, the theorem was indisputable, worse grief for Arben... He only learned about the theory of pursuit and became convinced that Newmore had cheated him on that memorable evening after the concert of electronic music. Linda's story about Newmore's drunken outpourings seared him as with hot iron. If he was a guinea pig, anything was possible. And since, despite

Newmore's reassurances, he was worried most of all by the question of pursuit, he made an enquiry at the Great Information Centre. Several minutes later the relevant formulae were flashed onto Arben's screen.

"Quicker, quicker," he urged on the Centre. His mind had become so agile that the main idea of the theorem became clear to him before the computations were half finished. He could now grasp in a minute what formerly required a month's hard mental effort. And so he found out all too quickly the price he was to pay for his new brilliance.

"He'll catch up with me! He will!" Nothing else interested him. In despair Arben smashed his fist against the control panel. The mechanical voice which had been reading out the supporting text to the mathematical information stopped in mid-word. The symbols melted on the screen and the videophone turned into a huge unseeing eye.

"So much for his assurances..." Arben thought that evening in despair.

He could still hear Newmore's insinuating voice.

"All that is required of you is to be careful. That means not running plump into Alva. Then you will really be in for it. Otherwise there is no danger at all." And he added: "You may count yourself lucky—you are parting with all your ailments and cares for nothing. Later people will be paying me for this blessing as much as I see fit to demand."

"So you intend to start mass production? To become the saviour of mankind?"

“And why not?”

“How soon will this happen?”

“I hope very soon. All that remains to be done is to cut the costs. To standardise Alva. This first variant cost me fabulous money. In a word you are not going to be alone.”

“I suppose you have done something towards this end,” asked Arben, who by then had learnt something about his friend’s character.

“Unfortunately not yet,” Newmore said with a regretful shake of his head.

“No money?”

“Oh, money is the last thing that worries me.”

“But haven’t you spent all of your inheritance?”

“Small matter. There are enough moneybags with frayed nerves who would be only too glad to give me credit. Judge for yourself—instead of all these half-measures, spas, water treatment and the like I’m offering a radical cure. So far people have not learnt to get rid of nervous disorders.”

“Haven’t they?” Arben asked doubtfully.

“They haven’t and they can’t, take my word for it. At best they drive the illness deep inside, and this makes things only worse. Me, I relieve one of illness altogether. I take it away from him. I have no idea of its nature and, frankly, this does not concern me in the least. I simply erase the illness as they wipe away chalk marks on a blackboard.”

“And what if somebody should want to restore the original inscription on the blackboard?”

“I can’t imagine why anybody should.”

“What if he does anyway?” Arben insisted.

“I have not gone into this so far.”

“But it shouldn’t be difficult, what do you think?”

“I don’t imagine it should.”

Knowing Newmore’s tendency to brag, Arben took his words about unlimited credits with a pinch of salt. He had no means of knowing that in this case the famous biophysicist was not exaggerating in the least. Aloud Arben said:

“If you can get hold of money so easily, why then not start work on Alva Two, Three and so on?”

“I need information.”

“What kind of information?”

“Information about the interaction of a certain engineer by the name of Arben with Alva One. Without it I cannot proceed.”

“Why didn’t you say so before?”

“Why should I?” Newmore said with a shrug. “It is no concern of yours.”

“I like that! What I hate more than anything is to report on my blood pressure, temperature and the like. And you will insist that I should, won’t you?”

“Not really. I have a bioreceptor here,” Newmore explained, patting the black panel of a big installation, “it will tell me all I need to know about you. More, in fact, than you could ever tell me yourself.”

Alva seemed tied to him by an invisible thread. No sooner did Arben step to the side, than Alva repeated his manoeuvre. Arben hurried along looking back all the time. The

painfully familiar round-shouldered figure followed in his steps. The face he had seen countless times in the mirror... "I'm running away from myself. But is it possible—to run away from oneself?" a sudden thought pierced him.

The car remained far behind. Its black quadrangular shape glistened oilily under the swaying lantern, while the razor-sharp beam of the headlight lay listlessly on the muddy pavement. There was not a soul around.

Every step took him further away from the protection of his plastic-lined car. But turning back meant bumping into Alva. The moving walkers had all been switched off—it was late. His one hope was the underground.

Never before had Arben realised how long was the street in which Linda lived. Or did it only seem so because he had not been doing much walking recently?

Arben shivered and tried to break into a run, but immediately a springy wave hit him in the face so forcefully that he gasped and had to stop for a second. The stop cost him three or four precious metres. Alva was now much closer and his every feature could be distinguished as he entered the circle of light cast by a street lamp. "He's as pale as death," thought Arben. "No wonder Linda was scared. Newmore must have miscalculated something here..."

It was a good thing at least that the street was straight as an arrow. Any turn played into Alva's hands, who could easily cut corners: a stone wall was no obstacle to this immaterial

cloud, which looked like a human being, like himself.

They could walk on and on, but Arben felt his strength giving way. He was in the trap of the city's stone jungle, and the key to the trap had been hidden by this wily cheat Newmore.

His heart was beating slowly and painfully, every beat forcing his rib cage. This was a familiar sensation, but one he had time to forget. Some time passed before he diagnosed it—he was afraid! He was in a dither, something that had not happened to him in the last two months. Newmore had deceived him here too.

Arben did his best to calm down. His agitation only helped his pursuer. Indeed, Alva had livened up. His legs wearing huge boots with vacuum pads were moving faster, his unseeing glance was fixed on Arben, he even stretched out his hand as though to catch his second ego.

Arben fancied the chase had been going on for an eternity. He had been running endlessly, it seemed, along this deserted street, pursued by a bunch of cares and troubles from which there was no escape and no shelter.

Ahead loomed a white cupola decorated with a lighted letter denoting an underground station. Above blinked indifferent stars. At last! In a minute he would enter the station, put a coin in the turnstile and step on the escalator band that will carry him down, to the trains.

Arben even felt sorry for Alva who was going to be so easily outwitted. It was as though

he undertook to take a blind man across the street and abandoned him in the middle of it. Wasn't it strange? He was sorry for Alva as for a younger brother, a part of himself. And wasn't he just that? The triumphant feeling of escape from mortal danger suffused all of Arben's being.

It seemed strange to him that there was not a single person to be seen near the station. Usually a couple of tramps was sure to be hanging in the doorway warming themselves up in the warm gusts of air escaping through the doors.

Four granite steps... Arben pushed the door. It was locked. He hit it with his shoulder, well aware that it was senseless. Then hit it with his fist. The pain in his hand brought him to his senses. Was the station under repairs? Anyway, it had no importance. Belatedly he noticed a small sheet of paper tacked to the column. "The station air is being tested for radioactivity. The nearest underground station is..." Arben turned away. It held no interest for him, the nearest underground station. To reach it he would have to make a turn, and this brought his chances of survival almost to naught. Only going straight on could he hope to keep the distance between Alva and himself.

Alva was approaching at the top speed of three miles per hour. Arben even fancied that some colour had appeared in his cheeks. No, this should be the trick of night lighting.

One can notice hundreds of insignificant details in a fraction of a second. Was it like

the match which burns brighter just before it goes out?

Arben weakly leaned against a column. What a silly end. But wasn't the whole adventure silly? Well, now he would have to pay up. What was it Newmore had said: "One has to pay for everything in this life. If not with money, then with your own blood. This is a great law discovered by me."

Alva stepped up the first step. This was what any observer would have said—stepped up, and this was how Arben thought about it though he knew that when meeting an obstacle Alva simply rose over it like steam over a boiling kettle, while his legs imitated steps. The vacuum pads kept his legs on the ground so that he should not rise too high above it.

How clearly his brain was working! How much he could still have done for the Western and all of mankind! But in three seconds this strolling character would close in on him and everything would be over.

One cannot escape pangs of conscience. But it was so long ago. Even for criminals there was prescription. Arben saw Charlie's face distorted with mortal fear.

The second step.

Ousting Charlie (for two blissful months he had not seen him, and for this alone he should be grateful to Alva), a picture from his early childhood flashed across his mind. His father's farm in the West... An old windmill... Arben and his friends are running around it playing tag. Should he play tag with death? Win a few more minutes of life from it?

The third step...

Nonsense. He was not destined to get those few minutes. Alva will pass through granite of the column as a stick passes through damp clay. He would cross the cupola along the diameter and catch up with Arben easily.

A chicken strolling carelessly about the poultry yard does not know that a slanting shadow which had flickered above meant a death sentence signed by the hawk's wing. Arben knew his sentence. And that was the only difference between him and the defenceless chicken. Only the polymer threads of the plastic's long molecules could have protected him from Alva.

Arben leaned back and his hand touched the wall of the cupola. It was lined with rhomboid tiles, cool and slippery like bits of ice. That was the last sensation he was to know in this world. And if the after world existed, he would soon be facing Charlie. What was he going to tell him?

Alva leaned forward like a man walking against the wind. It was only at this instant that it hit Arben—the tiles were made of plastic!

A man stood with his back to the wall, his arms flung out. Another one had mounted the steps and was unhurriedly approaching his double. Suddenly the man who was pressed to the wall tore himself away from it and began to move round the cupola. The tableau reminded one a film showing a chase in slow motion. If the speed were increased, the spectator would have seen a desperate race whose stake was life itself. But there was no film

and no spectators.

Alva seemed to have expected this new manoeuvre. He made busily after his double who had ducked behind the cupola. The cloud glided along the plastic-lined wall unable to make a short cut across it and thus catch up with his prey.

So fate had granted him those several additional minutes after all. Arben realised it could not be more than that. Alva could always outdistance him in a circle race. And not merely because Arben would eventually drop from fatigue, but much earlier than that. Arben now knew it very well. This was not a chase along a straight line where all Arben had to do was to move away. In moving along a circle Alva had an additional advantage in being able to suddenly turn about and thus meet his victim. Arben, on the other hand, could not execute such a manoeuvre, so the distance between them would be steadily dwindling. Anyway, could Arben compete in strategic thinking with this perfect cybernetic device which guessed at any move his opponent could make, calculated his every step and built his plan of the chase correspondingly.

Arben was afraid to look back. He fancied he could hear Alva's laboured breathing behind his back, though Alva, of course, did not breathe. It was just his nerves playing tricks on him. He never imagined that the steel nerves he had been endowed with by Newmore would give way at the crucial moment. All sorts of weird things occurred to him and even Handsome Charlie had swum to the surface from

the subconscious. For the last few years of his life he had striven, vainly, to get rid of that vision which burned him and left him not a moment of peace. He could not even share this nightmare with anybody, could not tell Linda about it. Telling might have made it easier. And then Newmore had come forward with this tempting offer of transferring to the unprotesting Alva all his memories, worries, all that was eating Arben. How could he but agree? They had made several turns round the station's cupola. With each the distance between them had decreased.

It was little short of a miracle that Arben managed to dodge Alva's outstretched incorporeal hand. Arben's jacket smouldered at the brushing. Arben threw off the jacket.

As he walked on buckling legs round the cupola Arben stared hopelessly at the blurred perspective of the long street at the end of which he could barely see the beam from his car's headlights. And then a simple and brilliant idea dawned on him. Why, he could start along that street back towards his car. Alva, to be sure, would follow in his steps, but he had no need to fear him on a straight line. The distance was really not big, and he ought to make it to the car before Alva closed in on him.

A dash—and Arben tore himself away from the cupola which had saved his life and started on his way back along the street. Alva followed behind at a distance of a mere metre or two, so Arben even refrained from swinging his arms for fear of touching him.

Each step was bringing him closer to salvation. The car stood where he had left it, in front of Linda's house. What was the girl doing? Probably asleep by now. Or was she reading *The Call of the Abyss*? Or *The Road to Delight*, that stupid magazine?

He'd need time to open the car door, jump inside before Alva squeezed himself in and shut it close. There were fifteen steps left, ten... two... Arben yanked the door desperately and dropped on the floor of the cabin. From behind came the noise resembling that of ripped cloth. There was a white flash and he felt a sharp pain in the back of his head which spread in waves over his whole body. But the spring door had snapped shut just in time.

After a while Arben regained consciousness and groaned. He had a splitting headache. His whole body was numb and felt like a sackful of cotton wool. He recalled the chase and his miraculous escape. With difficulty he raised himself on his arms, glanced out and shrank back. A white ghost was pasted to the windscreen, staring at him. Surely it could not be himself? No, he was not looking in the mirror—it was Alva who had chosen the spot where he was nearest to Arben. His frozen face reminded a mask, his hands were eagerly grasping the radiator. He was utterly immovable, waiting for his victim to emerge—he had patience enough and to spare.

Arben heaved a sigh of inexpressible relief, touched the corner of the plastic lining which

had got unstuck and pressed it back in place.

When he felt a little rested, he pushed the starter and the car moved forward. Alva's face disappeared from the windscreen, and his body slid off the radiator.

Arben turned the car and looked back. Alva's nebulous figure was melting in the distance. Arben lit a cigarette. His nerves were now under control. But the back of his head still ached terribly.

Well, so he had not been able to fully get rid of Charlie. Dead, he still persecuted Arben. Even Alva had only been able to keep him at bay for two months. The tormenting memory was back...

Newmore entered his laboratory and sank down heavily onto a chair. He was in a foul mood. To think that he would have to interrupt the experiment which had started so propitiously, to destroy whatever had been achieved! And to destroy Alva, his brainchild. To reduce him back to a conglomeration of elementary particles. How many sleepless nights had gone into his creation, how many hopes had been pinned on him, how much money, if it came to that, had been invested in him. And all this was to be lost.

Newmore touched his throat gingerly. After the ugly scene at the restaurant he had been furious with Arben, but to Newmore's surprise his hatred had soon melted away. Instead he felt sorry for the man. He had a premonition of disaster, that arose out of Arben's

disconnected story of Alva's behaviour. If this story was not a figment of the engineer's imagination, it meant Newmore's calculations had been incorrect and Alva's conduct was different from what he had expected it to be. Or was it all Arben's fault? Was he not careful enough? After all Alva was stupid, it ought to be easy to hoodwink him.

But it was too late to get to the root of the matter. Newmore had given his word and he was going to keep it. Alva would perish and Arben would return to his former unenviable condition.

Newmore rose and took a turn up and down the room. It was time to push the button summoning Alva, but he tarried.

Unusual thoughts swarmed in his head, depriving him of his habitual calm. So this calm was in actual fact an illusion. It was like the surface of a lake, seemingly smooth and steel-like. Clouds float in its depth, and trees on the water edge peer indifferently at their own reflections. The surface is unshakeable. But a gust of wind comes and the illusory peace is ripped to shreds.

So it was with Newmore's inner world, which had been seemingly cast in the armour of immovable laws. Of course, the formulas expressing them were terribly complicated, but they were true nonetheless. Newmore had been prepared to stake his own head on it. Why then was Alva behaving so queerly? There is no effect without cause, as there is no smoke without fire. Where had he made a mistake?

Suddenly Newmore stopped short, illuminated. Could it be that man did lend himself to a mechanical division into good and evil, virtues and vices? Was individuality an indivisible fusion of all human qualities, failings included?

For some reason Newmore recalled the toy his father had brought him from an interstellar trip. It was a small ball, an "all-seeing eye".

...The room was in semi-darkness. In the far corner, where the desk stood, there was a blue brilliance.

"How pretty!" Linda had said stopping in the doorway.

"Come nearer it, don't be afraid," Newmore had urged her, prodding her lightly in the back.

The eye was sparkling, an amazing, downcovered jewel.

"The 'all-seeing eye'," Newmore had said.

There was disbelief written on Linda's face.

"Don't you believe me?" Newmore cried heatedly. "Listen then." He had stretched his hand to the sparkling ball and pressed something. And the ball began to speak. A colourless voice listed the information required of it:

"Kind—human, sex—feminine... Approximate age in Earthly units—14 years... Volume of the cranium... (there was the hoot of the aerobus outside the window, which swallowed the number)... teeth, all healthy," the ball continued. Linda stood motionless listening. "Hair—light-golden..."

"Ginger," Newmore supplanted.

"The internal make-up is as follows," the ball continued. "Length of the esophagus..."

“Shut up!” Linda suddenly cried, and the ball desisted obediently.

Linda’s anger subsided, and she ran out of the room in tears.

That night Newmore was unable to fall asleep for a long time, tossing in his bed, getting out of it, smoothing his pillow, having a drink of water, but sleep evaded him. For the first time he was wondering about things which had never occurred to him before. Was it then that the idea of Alva germinated in his mind, the idea of a man’s double who would take on all his failings and troubles?

Then the boy divined what had been robbing him of sleep. It was the blue brilliance coming from the corner. How was it made, the “all-seeing eye”?

He must get to the root of it.

Newmore swung his legs down to the cool floor. The blue brilliance drew him like a magnet.

Walking over the chill plastic, the boy approached the table and touched the ball. If he pressed that little knob the ball would immediately tell him how many ribs he had, what was the tension of his heart muscle, and such like. It was eerie. He thought he understood Linda’s chagrin. Should he beg her pardon? Oh, rot! She would forget all about it by the morning. Anyway, she was always crying over one thing or another. A girl, what would you?

An irresistible power impelled Newmore to pull out a desk drawer and take a scalpel. The ball, a messenger of a distant planet, was giving off a serene radiance.

The scalpel had become hot in Newmore's grasp as the boy stretched his hand towards the ball only to snatch it back. In the end he decided that he would only make a small incision of the outer membrane. This shouldn't really harm the eye. He'd only look what was inside and then mend the incision with bioplastic. There wouldn't even be any scar left. Last summer he had performed such an experiment on a frog and all ended well.

At last Newmore summoned his courage to make the incision. The outer membrane proved quite easy to cut, offering almost no resistance. The thing Newmore had feared most of all—that liquid would gush forth from the cut—did not happen. The ball continued to shine, and, waxing bolder, Newmore deepened the incision. "After all doctors cut a live man up when he's ill and then they suture him up and he's none the worse for it," he thought. "The main thing is to be careful. Surely this ball can't be any more complicated than a human being."

Beneath the membrane was a web of innumerable tiny veins, so intertwined that even the most patient person in the world could not hope to untwine them. "Neurons," Newmore guessed. Usual vessels, tiny tubes—nothing mysterious really...

Newmore bent over the ball, now split open. It reminded him of an exotic fruit, and Newmore even fancied it gave off a faint aroma. Suddenly the blue light began to dim. Night poured into the room. Newmore felt for the switch. He'd mend it in a jiffy, he couldn't

have really harmed the eye. He had not cut through a single thread. All he needs do is bring together the edges of the cut and join them with bioplastic.

The film quickly mended the cut. The ball now was whole again. But it no longer emanated light. Newmore switched off the lighting. Impenetrable darkness reigned in the room.

Vainly did he press the knob—the ball was silent. The “eye” was dead, and it was he, Newmore, who had killed it with his own hands. All family tried to comfort him, Father, who promised to bring him another from the next trip, Mother and Linda. But Newmore was inconsolable.

Only now, many years later, he seemed to glimpse at the truth. On that distant night, armed with a scalpel, he had destroyed the unity which was the blue ball. Ah, that was why he had recalled it! Wasn't he now trying to destroy a unity, which is every human being, particularly an engineer employed by the Western whose name was Arben?

Newmore came up to the window. This mad world was exhibiting mad weather. A thaw was on, although a few hours ago, when he was talking to Arben, the air was crisp with frost.

A drop of water trickled down the window along the outer side, leaving a zigzagging path. It moved in jerks like a little lizard. The touch of the cool glass against Newmore's hot forehead was pleasant. The drop passed in front of Newmore's eye and disappeared below.

“It is that very drop, if you like, in which

you can see the reflection of the entire world," thought Newmore. "One only needs a correct view of things. Take this drop: it is an organic unity of two elements, hydrogen and oxygen. Separate one of them, and water as such will disappear..."

Newmore's laboratory was situated high above the ground, and the window offered a bird's eye view of the part of the city lying outside the gate. The distant perspective was also clearly discerned on a sunny day, but now it was veiled by a fine drizzle.

In the square in front of the main entrance some roadworks were under way. Newmore looked closely. A truck that looked like a whale was moving in a circle, leaving behind a glistening band of a new pavement. Why were they changing the covering of the square in such an unsuitable weather? Were they perhaps preparing an artificial ice-rink for a pageant? There was some festival or other to be held one of these days, they had all of a dozen every month.

Newmore came up to the panel and pressed the call button. Where was he, that incorporeal Alva called to life by Newmore? Was he wandering aimlessly about the city hoping for a meeting with Arben? Or was he lying in wait near Arben's flat? An ambush was what poor Arben feared most of all. Or could Alva be hanging about some quite unsuitable place like, say, a museum or the posh Pythagoreans' Club whose doors were closed to his double, Arben, or somewhere else still—after all no door was closed to Alva, or, rather, he did not need doors at all.

Just imagine the surprise of Arben's acquaintances at the sight of Alva's silent shadowy figure!

In a minute he would know where Alva was whiling away his time. In a few seconds he would respond to the radio signal with two figures—his coordinates.

Time was passing, but the eye of contact did not flash on. That was odd. Formerly Alva had never neglected to respond to the summons.

Was it some interference in the ether? Or a breakdown of the installation? A few minutes sufficed to check it and establish that it was in working order. Then a vague alarm turned into confidence.

Alva had got out of hand! This phantom who was not supposed to have any will of his own, this artificial conglomeration of antiparticles arranged into a semblance of human shape, who had obeyed his creator unquestioningly, had withdrawn his allegiance and became lost in a huge city, dangerous for none but one particular person...

This put a new complication on things. All he could do was hope that nothing untoward would happen during the night, and the next day, when Arben came for the appointment, Newmore would be able to catch Alva with the help of powerful magnetic traps. Such traps had been used in the old times on pulse spaceships to protect them from anti-particles. Arben would serve as an excellent bait.

At any rate he would have to call Arben and warn him. He would have to drive up

right to the gate, and Newmore would meet him. There would only be a small open square for Arben to cross. Once in the laboratory, Arben would be completely safe, Newmore would see to it.

"Western!" Newmore dropped into the receiver. But the screen remained dark. Newmore wiped his suddenly perspiring forehead. It appeared everything was against Arben.

Newmore moved the red knob.

"Control," a melodious voice sang out.

"I can't get in touch with the Western," said Newmore. (At least he had got in touch with Control!)

"Do not worry, please. The line has broken down." ("Is that a robot or a live girl speaking?" wondered Newmore looking at the blond girl's geometrically correct features.)

"When will the damage be repaired?"

"Towards morning." (Must be a girl after all.)

"What has caused the breakdown?"

"The repairs in the square." (Only a woman can smile like that.)

"Yes, I can see it out the window."

The control girl looked at Newmore expectantly.

"Tell me, what do they want that silly new surfacing for?"

"Excuse me, I'm not authorised to discuss the orders of the city authorities," the blonde said coldly.

The screen went dark.

"A robot sure enough," Newmore decided. Well, he now knew where he stood. He'd call the Western the next morning and warn Arben.

Newmore cast a parting look over his huge, temple-like laboratory and went to the door.

Newmore did not like human assistants, preferring the industrious if obtuse robots.

There were things to be done, and he did not expect to sleep that night. Alva's sudden rebellion—if that strange behaviour could be termed rebellion—had played havoc with his plans.

In the first place he would have to set up the magnetic trap. Besides, he must arrange for at least one of the rooms in the laboratory, a small one, to be lined—walls, floor and ceiling—with protective plastic. Here Arben would have to live until Alva, following the bait, gets caught in the magnetic trap.

The main thing was to catch Alva. Then Newmore would be able to get at the root of the trouble and paste the two halves into the whole whose name is engineer Arben.

There was nothing very intricate about lining the walls with plastic. Any laboratory assistant would cope with the task. But the less people knew, the better.

No, he would not entrust the secret even to a robot. He'd rather do it himself. Moreover, he'd do the job properly, see to it that not a chink is left, for it could mean disaster.

Newmore produced a roll of ionoplastic and set to work. However, he was dogged by a heavy premonition. Again and again his brain conjured up a picture of the two poles of a magnet that he had created, Alva and Arben, wandering in the stone labyrinth of a huge city.

These were the last twenty-four hours of Arben's existence as an "improved variant". Was it really an improvement on the old Arben? He would soon know—there were just a few hours left.

Arben was driving home in his car, the automatic driver in charge.

No, Newmore's experiment had not proved a success. Was it doomed to failure from the start? How could he tell? Could human nature be changed at all?

The incorporeal Alva had failed to do his job—he had even failed to rid Arben of the memory of Handsome Charlie.

"How wonderful it would have been to be able to design life to your own blueprints!" Arben thought wistfully. Were he entrusted with creating life all over anew he'd have seen to it that the least little creature on earth were happy.

His car sped noiselessly along the street. Casting absent-minded glances around, Arben thought about what awaited him tomorrow.

Why was life on earth inseparable from suffering?

The long-forgotten emotion stirred within Arben. It always preceded inspiration, when he began to improvise, words arranging themselves willingly into lines and thoughts clothing themselves in images. This feeling had not visited him ever since Alva had appeared in the streets of the city... Here, too, Newmore's invention exhibited a defect.

Arben closed his eyes. One after another lines flashed up in his mind.

“I ought to write it down... Never mind, I shall tomorrow, when I come back from Newmore,” Arben thought.

At this point he recalled Charlie.

It had happened long ago, when he was in his second year at college. They were in parallel classes, he and Handsome Charlie. Handsome was not merely handsome and well turned-out—always clean shaven and spruce, even during exercises when nearly every trainee sprouted a beard. Naturally, Charlie was a great favourite with the ladies. But that was just one facet of his nature—and not the most important one either. The amazing thing was that with all his romancing he remained the very best of the bunch. “Smart guy,” some said. “Fast operator,” others shrugged. Whatever the verdict, there was no one in school who could solve a complicated engineering task better than Charlie Canzone, and whenever inspectors came to the school, he was always called upon to uphold the school’s honour. Arben was consumed with envy. He understood that his fair abilities left him far behind the brilliant Charlie. However hard he might try, what he achieved at the cost of concentrated labour, Charlie, Fortune’s pet, did by a flick of his fingers. Moreover, his engineering solutions were invariably incomparably more elegant than Arben’s. “Hewn with an axe,” was what an examiner said about Arben’s design for an under-street passage.

Life became quite unbearable for Arben

when Winnipeg, an ethereal creature whose job was to control the classes schedule, came into his orbit. To begin with Arben fancied that at last he knew the meaning of his existence. Winnie, too, seemed friendly enough. She was quite willing to chat with him and once even consented to be taken to a cafe and treated to some ice cream. But one luckless day Arben saw Winnie in Charlie's company, and despair engulfed him. He spent his days devising a method of annihilating his rival, but what seemed feasible at night, proved to be a stupid stratagem in the light of day. For hours Arben would sit in front of a mirror, studying his very ordinary face. No, he was not equipped to challenge the irresistible Charlie.

Leaning against the back of his seat, Arben looked unseeingly at the dark masses of the houses, deep in slumber. The city fell asleep early after a hard day. Only the cupolas of night clubs were ablaze.

Why had he come to the hangar that day? In search of an oil-can? Or a roll of permalloy wiring? Or was it simply in search of relief from the heat? Thousands of times subsequently Arben had tried to restore every tiny detail of that day's happenings. But this particular aspect had completely slipped his memory.

It was a hot July noon. The heat was quite unheard of for those latitudes, and all were languishing. Arben, a northerner, was almost sick from heat. He recalled having wandered for some time in the training airfield before finally entering the hangar. He stood in the doorway until his eyes became accustomed

to the semi-darkness. It was cool in the hangar, and Arben walked in resolutely. Suddenly he stopped, as though running into a wall. In the centre of a golden cone of sunlight streaming from above stood Charlie. His face was serious. Arben looked. Charlie was busy with the catapult. "Is he scheduled to fly tomorrow?" Arben wondered.

The engineers had compulsory flying practicals, which involved, depending on the specialisation, anything from a single flight into subspace to a two-week training flight in space proper. Arben and Charlie would have just that one start: engineers specialising in ground work did not need any more.

The catapult was very rarely used in training flights. As a matter of fact, Arben could not recall a single instance. But a legend was current among the students about a rocket catching fire in flight, and the catapult flinging out the trainee who was unconscious from the overload. The parachute lowered him into a lake, from where the luckless spaceman was safely fished out. Nobody knew if there was any truth in the legend.

The principle of the catapult's action was simple enough. In case of danger a button was pressed, the top of the spaceship opened and the pilot was tossed out. The mechanism was programmed to act automatically in case of a breakdown, as in the legendary story.

Charlie appeared to be studying the automatic system. Arben knew that in the case of a fire a chemical chain was closed thus switching on the explosion mechanism of the catapult.

Charlie seemed not to be sure of the principle. Indeed, he was mucking about with reagents. Obviously out to compose a chain that works the explosion.

He was now aware of Arben's presence.

"Hot outside?" he asked loudly, examining a test tube with a bright green liquid.

Arben mumbled a reply and walked closer. His lucky rival drew him like a magnet.

"I want to find out if this thing may not go off of its own," Charlie said nodding at an armchair that looked like a throne.

"How?" Arben asked wonderingly.

"I mean without any cause, or for some silly reason," Charlie explained condescendingly.

This was the first time Charlie had deigned to talk to Arben seriously. Until then he confined his remarks to jokes. Or was it Arben's fault? He had always shunned people.

"I'm sure the catapult won't go off for any odd reason," Arben said with conviction.

"And I'm not at all sure about it."

Arben came up to the training panel. The knife-switch was open. Charlie patted the plastic seat on which many a generation of future engineers had worn their trousers thin.

"Dependability is problem No 1," said Charlie. "Every detail must have a reserve of strength."

"I disagree," Arben said mustering his courage.

"Why so?" asked Charlie, replacing the test-tube in the support and wiping his hands with a white rag.

"Excessive reserves of strength make a construction too heavy."

"Don't you think that insufficient strength

is far more dangerous?" Charlie asked, squinting his eyes. "In such a case contacts are liable to part at a breath of wind. As the result an automatic rocket goes off course, a building sinks after a whisper of an earthquake, while a girl..." he made a pause and then said succinctly, "a girl leaves you for another."

Blood rushed to Arben's face and he shrank back. He felt like a dog who was first given a pat and then a burning cigarette was thrust into its nose.

So many years had passed since and he could still see Charlie standing before him with a supercilious smile on his face...

Arben's car had passed through the city centre and was racing through a suburb. The houses here were lower, the lighting worse. Soon he would reach the Western. Home, sweet home. He must have a good sleep so as to be at his best tomorrow. Let's hope he'll fall asleep easily—his nerves were still good.

Charlie...

Taking no more notice of the squashed Arben, Charlie lowered the knife-switch carelessly, then leapt into the seat of the training catapult. As the investigation commission subsequently established, he wanted to test the action of the new reagent he had himself devised.

A sunray falling from above lit up a copper wire in the test-tube. Before getting into the chair Charlie put a sandglass in the support and the golden stream of sand was running down marking the five minutes. Charlie was out to test the strength limit of the system

he had devised. He was sure that the reagent would not eat through the wire in the five minutes to switch on the catapult. Actually, the wise thing would have been to put ballast in the catapult, but Charlie did not hesitate to jump into the armchair. Whatever else you could impute him, he did not lack courage.

Charlie pressed the arm support and a transparent hood of enforced plastic was lowered onto him. Now he looked like a spaceman in his cabin, a classical picture from a children's book. Such sugar-sweet charmers occurred on every page of space thrillers.

"He's gone too far, the swanker," Arben thought looking at the massive hood.

The golden pile of sand was growing slowly on the bottom of the sandglass. The copper wire was so thin it could barely be detected with a naked eye.

"Get out, enough!" Arben wanted to shout. But he never shouted it. And what was the point—the hood was sound-proof.

Like one hypnotised Arben stared at the thin trickle of sand. At last! Five minutes were over. Charlie smiled at Arben and waved to him. Then he lowered his hand on the arm support ... but the hood did not rise. "It's got jammed," Arben realised. Through the transparent plastic he saw Charlie's handsome face grow pale. He rose in his seat and strained against the hermetic hood, but it would not budge. Its purpose was to protect trainees during tests in poisonous atmospheres, and it was not possible to remove it by hand.

Charlie gesticulated, pointing to the panel

and shouting something, but Arben could not hear his words. He knew very well, however, what was required of him—to switch on the emergency stop signal. Then the catapult's action would be blocked. But Arben pretended he did not understand; he just shrugged helplessly and looked at Charlie pityingly. However, Charlie, who kept his head beautifully, made such unmistakable gestures, that one had to be a moron not to understand. Arben could no longer keep up the pretence.

“Göt you,” he thought. Another thought that passed his mind was that Charlie would never forgive him this tarrying, once he was safely out from under the hood.

The wire, meanwhile was no longer visible. Arben stretched out his hand to the stop signal—very slowly, and at that moment he was all but deafened by the sharp twang as of broken string. Deadly orange flame broke out fanwise from under the catapult. The capsule was hurtled upwards. He was too late! Whose shrill, hare-like cry was that, his or Charlie's?

The tall corrugated iron ceiling of the hangar boomed with the heavy blow. The beams, not intended for such stresses, shook. Splinters of the hood rained down on Arben.

Arben stood turned to stone, staring upwards. A terrible stain was spreading on the ceiling through which broke rays of the sun. A heavy drop fell on Arben's shoulder. He touched it mechanically with his finger, then wiped the blood off his hand with the rag Charlie had been using ten minutes ago and ran helter-skelter out of the hangar...

He had had two months' respite from Charlie. For two months the incorporeal Alva had been honestly doing his job, protecting him from the spectres of his conscience. But in the end Alva's own persecution had become an even more terrifying nightmare. Whose fault was that? Arben's, who did not fulfill all of Newmore's rigorous conditions? Or Newmore's, who had not fully thought out the design of his Alva? Most probably Newmore had been in too much of a hurry to let his brainchild out into the world, so that he could clear up some of the questions which remained obscure to him and then start mass production and the pumping of the money out of rich clients.

"He would cheat others in the same way he's cheated me," Arben reflected as he put his car away in the garage. "Money comes first with him, human lives do not matter. Newmore is peddling in illusions. As soon as I get rid of Alva I'll publish a statement to this effect..."

Arben walked out of the garage and stopped breathing in the cool night air.

...The hangar had been much taller than this garage—it was like the modern church which had been recently built in Arben's native town in the north. When he dashed out of the hangar, he did not see a soul around—all were hiding from the scorching sun. In response to his yells several sleepy trainees emerged from the tree shadows where they had been enjoying the blissful hours of the midday break.

"What are you yelling your head off for?"

one of them inquired.

“Had a bad dream?” a huge red-headed giant from the senior class suggested.

“Give him a handkerchief!”

“Pat his head!” the jokes rained on Arben. He stared at them senselessly.

“Hey, he looks quite batty!” The red-headed chap sounded alarmed. He had seen all kinds of accidents in his four years at the training school. Some trainees’ nerves gave way.

“Come on into the shade,” someone said kindly and took Arben’s hand.

Arben’s glassy eyes seemed to plead, but he could not bring out a word. The mocking or indifferent faces merged into one hideous mask.

“Why don’t you say something? What were you yelling about?”

“Come on! Has the cat got your tongue?”

“Hey, where’s Charlie?” one of the young men remembered. “He’ll diagnose this case in a trice.”

“He was here and then he disappeared somewhere.”

“Charlie!”

“Handsome!”

“Angel-face!” came the shouts.

Arben shuddered.

“There ... there,” he stammered pointing to the hangar.

“What’s there?” the red-headed one asked him patiently, as though speaking to a child and signing to the others to keep silent.

“There... Charlie’s there...”

“In the hangar?”

“On the ceiling...”

“Now everything’s clear. Charlie’s on the ceiling. Where else can he be?” The red-headed one said cheerfully. “The loss of space orientation,” he said to the others under his breath.

Somebody shook his head. The poor chap had had it.

The noisy crowd entered the hangar with jokes and laughter. Arben remained outside, alone. Even through the thick soles of his regulation boots he could feel the heat of the basalt flagstones the airfield was lined with. The vertical sunrays stung him. Dirty sweat trickled down his face. Arben did not wipe it away. He stood immovably.

...He stood immovably enjoying the night’s coolness. He had no cause to fear Alva for the time being—his double must be wandering somewhere in the centre of the city. Well, apparently one could not shake off such recollections, not ever. He had tried and nothing had come of it. That meant Charlie would be with him until his dying hour.

Not before he had become frozen stiff did Arben go up to his apartment. “I’ll see the doctor tomorrow. Tell him I got burned,” he decided locking up the door behind himself.

But he had no need to see the doctor. Towards morning the pain had eased off. Whistling a merry tune, Arben switched on the videophone. The pretty secretary averted her eyes as soon as she saw Arben. She just could not withstand his gaze.

“I won’t be coming in today,” Arben informed her casually.

“What shall I tell the boss?” the secretary asked.

“Tell him I shall be going to Newmore to discuss an idea.”

“He has already called,” the secretary volunteered unexpectedly.

“He did? At this number?”

“Yes, the company’s.”

“Odd!” thought Arben.

“Doctor Newmore said you had an important business with him. He asked that you should not be detained.”

“If only he knew I am going to make him hit the headlines!” Arben thought wryly and switched off the videophone.

Where was Alva? In the course of the night he must have made his way towards his home. Or was he wandering along the streets aimlessly, having lost his reference-point. How could the poor chap know he had practically no time left. And that he was going to be killed, ironically, by his own creator. Arben would soon return to his previous condition, while Alva would disappear, disintegrate into elementary particles. How was this going to happen, he wondered, gradually, or all at once, like fireworks. He could ask Newmore. On the other hand, better not. This must be a raw spot with him.

Arben tried to move his head as little as possible. His neck was still painful, but the pain did not mar his radiant mood.

Who was Charlie? Oh, that character who got himself squashed against the hangar’s ceiling! Serves him right, too. This did not have

anything to do with Arben.

With the night dusk his fears had drifted away, and Arben regained his self-confidence. Perhaps he should not go to Newmore? Perhaps he'd better leave things as they are? But he rejected this thought. The memory of that night's chase along the deserted street and around the station cupola was too fresh and terrifying. If it was not for that cupola which enabled him to outwit Alva, he'd have been dead... And then this recollection of Charlie which had appeared so unexpectedly and terribly out of nowhere, having broken through the thickness of two months' oblivion. If that was the case, Newmore's invention wasn't worth a brass farthing. Let him look for other fools to experiment on. He was hardly likely to have many volunteers after this failure with Alva which nearly cost Arben his life. Newmore had deceived him. Nor was he going to keep mum about it.

Formerly, before Alva, he was sick. Now he was well again. Surely he did not want to return to his former condition! .. No one knew that all mental disturbances which dogged Arben had but one name—Charlie. He had been tortured by nightmares, deprived of sleep, driven to the end of his tether. When Newmore hinted that Alva could relieve him of evil memories, could he miss such a chance?

But now he would know what to do. He'd send Charlie packing, just like that.

"You are a murderer," Charlie would say as was his wont.

"It's a lie," Arben would answer.

“What do you mean a lie?” Charlie would ask with surprise. “Who murdered me then?”

“You murdered yourself. Or, rather, your boastfulness murdered you. Our salvation is in humility.”

“Oh, so it was my pride which made you tarry instead of switching on the emergency stop signal when I was locked in the catapult?”

...Charlie’s sarcastic voice sounded so real that Arben started and looked round. There was nobody of course. He was in his car speeding along the bridge which joined the eastern and western parts of the city. The automatic driver was taking it along the shortest route towards the destination coded out by Arben. The lighted dots on the map indicated that it had already covered more than half the distance.

“Newmore must be waiting for me,” Arben thought looking down at the leaden water of the river which never froze, not even in the coldest winters, full as it was of radioactive refuse dumped by the Western. It was odd to see black steaming water moving sluggishly between snow-bound banks towards the bay. The company made assurances that the waste products were absolutely harmless. Indeed, there was plenty of fish in the river. Still the townsfolk hesitated to bathe in this water and the city beaches were mostly empty.

As the line of lighted dots grew, a vague anxiety mounted in Arben’s heart. Why had Newmore chosen the Biocentre for their appointment? Arben had been there several times and knew that cars were not allowed on its territory.

Arben would have to enter the pass lodge and show a pad sheet with Newmore's signature to the electronic device placed beyond a little window. The device would immediately establish the authenticity of Newmore's signature—no faking was possible—and a ray of a photoelement would give a flash. The turnstile would make a full turn and Arben would be free to go in. There he would be safe under Newmore's wing. If Alva managed to get in there, both Newmore and he would have to die. Undoubtedly Newmore was aware of it. He must have made preparations for the dangerous visit and lined the walls and ceiling with plastic.

The car braked so sharply Arben was thrown forward. The pain in the back of his head, which had dulled down, pierced him anew. Arben looked ahead and swore. The square in front of the Biocentre was fenced off. A notice informed that there was no through way because of underground work in progress.

Smooth ice was sparkling in the morning sun. Arben sat in the car mustering courage.

"How can Alva know I'm here?" he argued. "He must have developed some kind of reflexes in the two months, and must know I spend this time of day at the Western, on the other side of the city. Newm has called that he is awaiting me."

Arben decided to make the plunge. He threw the door open and jumped out. The day was a cold one. The icy crust on the square was glittering dryly. "Odd kind of ice," Arben thought. As soon as he stepped on the icy surface he slipped and nearly fell. His hand

touched the sparkling surface. Artificial ice, that's what it was. What idiot had thought it up—covering the square with artificial ice? Who needed it and what for? And why not use ordinary water? Ah, yes, it was warmer yesterday and water wouldn't have frozen!

Remembering his childhood, Arben took a run, intending to slide along, but a resilient wave hit him in the face so hard he gasped. "Never mind, this speed limit will soon go too," he thought, making his way cautiously forward.

There were hardly any people in the square. Only a few pedestrians were making their way along the rim. It was probably less slippery there. But Arben decided to make a short cut.

Absorbed with his thoughts, Arben did not at once notice the figure that had detached itself from the monument in the centre of the square and moved towards him.

When he did see it, he muttered: "Charlie! Again!" and averted his glance.

But it was not Charlie. Too late did Arben realise that it was his double coming in for the kill.

He had lost time. Besides, the opportunities for manoeuvre on the slippery surface were practically non-existent. As for Alva, ice or asphalt was all the same to him.

Still, Arben stopped in his tracks and thought of running. It occurred to him the next moment, though, that it was no use, and anyway he might just as well put an end to it all since Charlie was back. So he smiled and walked to meet his spectral double... To meet Charlie,

to meet the secret pangs of his conscience.

“But how did he find out I shall be here this morning? Surely he couldn’t have developed telepathic abilities?” was Arben’s last thought.

The explosion was not too loud. A brown mushroom rose over the site of the flash. The square, which was nearly deserted a minute ago, suddenly came to life. In any city at any time of day or night curious observers will always gather in a minute to watch an accident—whether it be the collision of two helicopters or merely a fainting fit.

“The pipe has burst,” one of them suggested.

“Not likely. They blew a petard, I saw it with my own eyes,” another asserted.

The ring around the brown cloud thickened as new people hurried over. Nobody, however, ventured to come near and they hung back cautiously.

The oddly-shaped cloud was lengthening into a tall column that broadened at the top.

“I saw it all,” somebody was relating excitedly. “There was a man walking across the square. Not walking, rather, but sliding along and slipping all the time.”

“Where was he going?”

“Over there.” The speaker nodded towards the old monument which depicted an idyllic couple, a shepherd and a shepherdess, resting in the shade of a tree. “Well, so he was walking along and suddenly another man appeared from behind the monument and went to meet him. I looked and could not believe my eyes. They were alike as two peas in a pod. They could be twins...”

“Seeing double, were you?” a young man interposed with a sceptical smile.

“Let me finish,” the speaker persisted. “So they walked to meet each other in a kind of leisurely fashion. The one who had appeared from behind the monument even stretched his hands out towards the other. They’re going to hug each other, I thought. But the moment they touched, there was this explosion...”

“Too naughty of them!” said the young man who volunteered to entertain the crowd with jeering remarks.

“Well, and what happened to these two?” asked the old woman in black.

“I don’t know... They seem to have disappeared,” stammered the speaker.

“What do you mean disappeared?” the old woman demanded sternly, as though taking the speaker to account for all that had happened. “They couldn’t have disappeared. They were God’s own angels, and now they are among us,” she concluded triumphantly.

Mocking replies rained from all sides.

“The angels have blown themselves up,” a boy screamed delightedly.

“Nuclear angels,” the bass growled.

At the height of general merriment a pale man emerged from the gates of the Biocentre. The crowd became subdued. The man walked with assurance in his anti-friction boots.

“It’s Newmore,” somebody said in a whisper.

The crowd parted and Newmore walked up to the gas column, whose dark core had by then lightened considerably. Newmore produced a dosimeter from his pocket and

pushed it into the thickness of the cloud. It was only then that people became aware of the danger of irradiation. The front ranks began to back off.

Newmore glanced at the dosimeter's scale and shook his head.

"Please, what has happened?" the young jester asked.

"Can this be a pipe blown up?" somebody asked.

"That's right," Newmore muttered. "An underground main has burst."

"There, what did I say!"

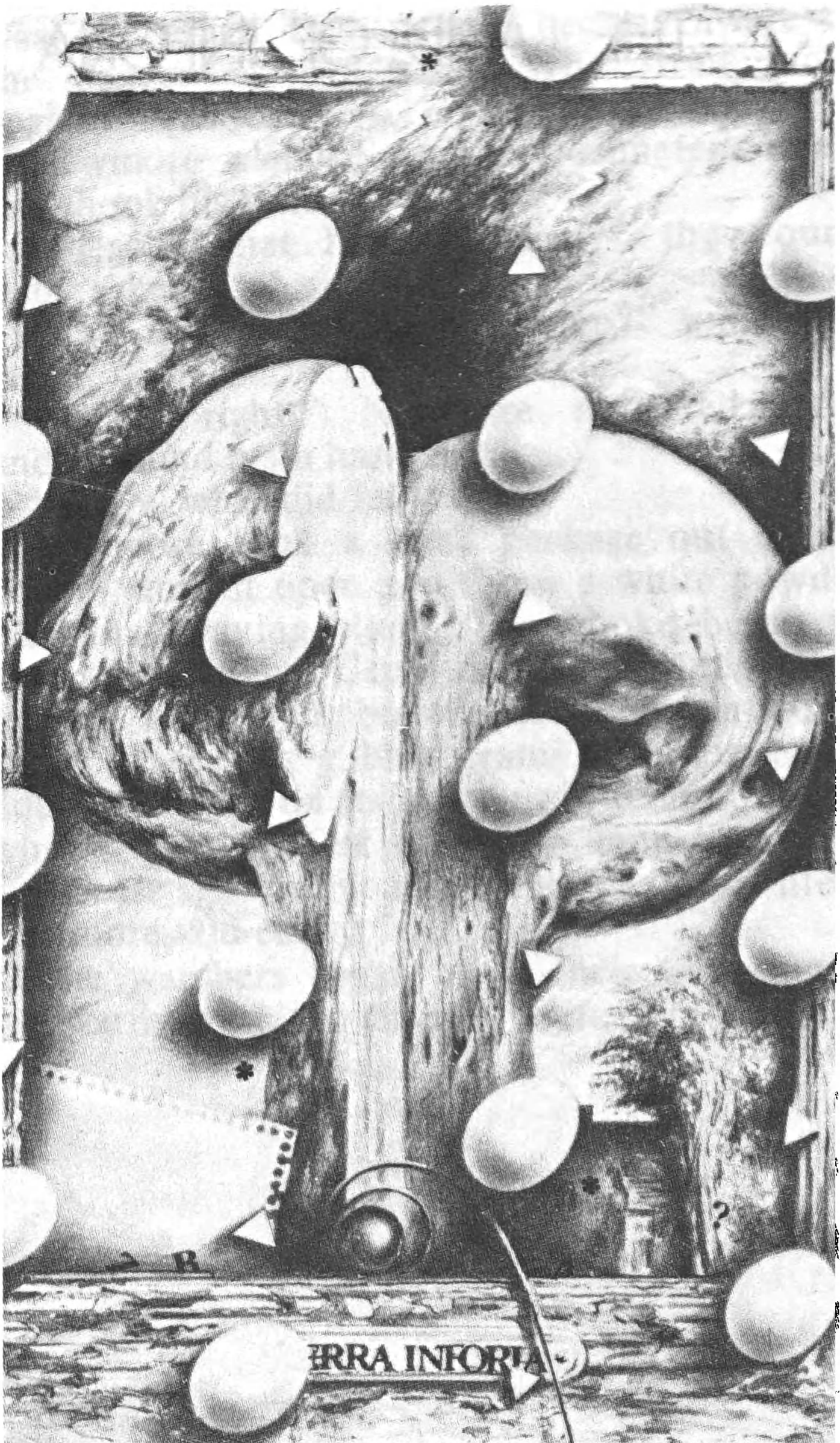
Newmore took a small package out of his pocket, tore it open and threw a white powder into the swaying cloud. The smoke began to disperse quickly. Gaps appeared in it and a minute later the brown column was gone. In its place was a blue crater with some oily liquid gleaming on its bottom. The daring ones, who peeped in, felt the sharp tang of ozone.

"Please go away if you value your life," Newmore said curtly.

The watchers began to go their way, stepping warily over the slippery surface of artificial ice.

THE LAND OF INFORIA





I really should have reached the railway station long ago, but there was still no clearing in sight, no break in the dense growth of trees. Dog-weary, I cursed this mushrooming jaunt. Enticed by the mushrooms, I had dropped far behind my companions. The only thing lacking now was for me to get lost!

As I ambled along I munched a few raw mushrooms to blunt the pangs of hunger.

At last the gaps between the trees became wider and a faint smell of smoke was wafted to me from somewhere. "Leaves burning, must be the station," I sighed in relief.

However, it was not the station, but a small town, entirely unknown to me. Along its main street stood neat little houses with varicoloured gabled roofs.

This was not the station at all! And not leaves, but tapes of some kind, that sizzled and curled snakily, were being burned in a front garden by a short little individual.

I came closer.

An adult, and not, as I had at first thought, a boy, was tending the fire—but he was no higher than my waist.

"What are you burning?" I asked, stopping.

"This?" The midget's voice was pleasant, his movements adroit and graceful. He poked several tapes that had squirmed out back into the fire:

"This is inforia."

"Inforia?" I thought I hadn't heard aright.

"Yes, old information. Used up," he explained, glancing at my blank face.

“Of course, who needs old information,” I remarked cheerfully, thinking how strangely he was attired.

“You must be a stranger?”

“Yes, I’m a stranger. Could you please tell me where to find a bite of food? It’ll take me some time to get to my train...”

“The nearest nourishment post is around the corner on your left.”

“Thank you.”

The fretwork of the fence seemed to be turning into some strange writing. My eyes glued to the hieroglyphs formed by the artfully fashioned fretting. I backed away to the bulging plastic path.

“But I wouldn’t really advise you to go there,” said the manikin. “They serve stale information.”

“So where does one get ... fresh one?” I asked in bewilderment.

“You must have come from the capital. There, of course...” The little man poked the fire with his stick, causing a sheaf of sparks to soar up into the darkening sky. “But here...” he waved his free hand. “However, let’s try it anyhow.”

A very pretty young girl appeared on the stoop of the doll-house—for all the world the spitting image come to life of the doll I had bought for my daughter the day before.

“Oll,” said the little man, “please take our guest to the central Infor.”

“Very well!” The girl’s voice rang like a silver bell. She ran lightly down the stoop.

We walked a fair distance. I looked with great interest at the gabled cottages built of some strange material.

"What's this stuff?" I asked, touching the wall of a two-storeyed building. I could have reached to the ridge of its roof, it seemed to me.

"It's petrified information pressed into briquets," explained Oll.

She, too! What had I got myself into? A houseful of lunatics—that one might understand. But a whole town of lunatics?

"Must be good material," I remarked, just to keep up the conversation.

"Everything is made of it," said Oll.

"Is it durable?"

"Not always," Oll shook her little head. "Sometimes the information is unscrupulous."

"What happens then?"

"The briquets crumble into bits. Once a whole house caved in because of this."

"A whole house? How awful!"

"Yes, indeed. It turned out that the briquets forming the foundation contained false information. Can you imagine?"

I nodded in sympathy.

"Since then the inforia has always been checked."

As we went along Oll exchanged greetings with many little people who looked at me inquisitively.

I was a veritable Goliath among the inhabitants of that town, although normally my height is nothing to boast of.

"Here we are," exclaimed Oll. She pointed

to a transparent door and ran off.

I entered the Infor, stooping instinctively, for my head almost touched the ceiling. Trying—unsuccessfully—to attract no attention to myself, I picked up a tiny tray and took a place at the end of the line by the counter. Self-service! Well, at least this was something normal, so I took heart a bit. I would have something to eat and then set off for the station. The trains run late on Sundays.

However, the food in the showcase under the counter again perplexed me. I'd never seen the likes of such dishes in my life! Garish red cubes, blue spheres, green triangles.

When my turn came I hopefully grabbed a streamlined, ellipsoid white object: an egg! But my hand felt the cool touch of metal. Shrugging my shoulders, I began to load my tray with all the miniature dishes I could see, trying not to miss a single one. The people in the line whispered:

“Oh, look, look!”

“My, isn't he hungry!”

Looking at the floor, I made my way through the low-ceilinged room. Finally finding a place, I sat down and tried to take a bite out of the red cube. This attempt almost cost me a tooth. My neighbour at the table looked at me in astonishment, his mouth hanging open. Just so had my little daughter looked at a Venusian ardrag—a dipnoan reptile—when we visited the Zoo.

“Sorry, unusual food, you know...” I mumbled, smiling miserably.

The man nodded understandingly. He was

an identical copy of the first little man I had met, the one who had been burning the writhing tapes. However, to my eye all the inhabitants of this weird town were siblings.

“Look,” murmured my neighbour. Carefully picking up the red cube in his slender fingers, he got up and approached it to my temple.

A miracle! I suddenly felt an alien something permeating my whole being. Strange rhythms illuminated my mind, my ears clearly heard the strains of distant music, and fiery rings danced before my eyes.

“Please hold it yourself,” whispered the little man.

Gradually I began to perceive a certain order in the pattern flashing before my eyes, one I could probably not have expressed in words. Waves of music, merging with waves of light, invisible and inaudible to others, carried me along, melting my exhaustion as ice is melted by warm water; even my hunger abated.

When the music became louder, the visions were more vivid. It was a wonderful fusion of power and tenderness, of sadness and joy. Kettle-drums rumbled, French horns sang, a 'cello mourned... Although—why call them kettle-drums and 'cellos! There were unknown—to me, at least—musical instruments; never had I heard anything like them when my little daughter and I turned the knobs of our videoscreen of an evening.

No sooner had I thought of my little girl than the music began to fade. The fiery rings paled, becoming fainter and fainter.

I pressed the cube tighter to my temple, but the music had stopped. I put the crystal down on the table.

“Well, how did you like the inforia?” asked my companion.

My silence—I hadn’t come to yet—was interpreted rather strangely.

“Not fresh enough, I suppose?” he asked with concern. “We’re not the capital, you know... Try this,” he said, pointing to the egg made of a light metal resembling aluminium.

“What is it?”

“Information on unstable stars! My favourite dish,” smiled the little man.

His favourite dish was not as pleasant as the first. None were the other dishes, but, strange as it may seem, I was no longer hungry. When I came out into the street, the toy town had already been lit up for the evening. I had a nagging feeling that I had already seen just such a fairy-story town before. But where? Had I read about it with my daughter? Seen it on the screen? I tried to remember, but in vain.

Walking cautiously through the narrow streets I peeped—this I must admit—into the windows. I wanted to understand these people and find out what comprised the meaning of their existence.

In some of the windows I saw familiar scenes. Little beings sat, holding cubes or spheres at their temples, concentrated, absent-minded expressions on their faces. My daughter looks like that when I tell her stories...

I had already comprehended that the small

objects of regular geometric shape were information blocks. The Institute at which I work has been working for quite a number of years to create portable blocks on which diverse information could be recorded. Can you imagine how important and useful this would be to spacemen? Instead of hundreds of heavy encyclopaedic volumes they would be able to take a small cube or sphere with them on a distant flight, where every gram of extra weight counts. And on earth, too, such blocks would find their uses. Our Institute has almost reached its goal... But, apparently, these doll-like people have outstripped us.

No, no, these creatures are no humans, I reflected, although they do resemble us. How can a human being live on information alone, be it ever so interesting and diversified?

Now I noticed slogans traced in flaming neon in the evening sky: "We Shall Produce More Inforia", "Top Quality Inforia Only", and others of a similar type.

My head buzzed with the information I had dined on. I felt that this called for careful thought. Were I to tell my friends about my adventure, they would never believe me, while my colleagues would simply hoot at me. But it was all so real! Here I stand at the corner of a busy street, passers-by hurrying along, intent on their own affairs. I put my watch to my ear—it ticks as usual, the hands showing half past eight—darkness falls early in the autumn. I can even pinch myself—the pain is perfectly real.

Arrivals from outer space, perhaps? Nonsense!

Right out in the open, a stone's throw from the railway station? And nobody but I to have noticed them? Besides, this little town is evidently not their only community, for a "capital" has been mentioned. Does it mean that a whole country lies between the forest and the railway tracks? The Land of Inforia, not to be found on the map?!

A man was unhurriedly approaching. In my heart of hearts I really could not think of them otherwise, so closely did they resemble humans, only, as it were, in a miniaturised edition. This person looked old and wise. Just what I wanted. I'll ask him to explain it all.

I stopped and touched the old man's arm.

"I beg your pardon," I said, "but could you spare me a few minutes?" The old man did not seem surprised.

"Why not, let's make an exchange of inforia," he replied.

"Inforia, inforia," I grumbled, "that's the only thing I hear about. Don't you have any other subjects of conversation?"

"Is there anything more important than inforia in the world?" asked the old man.

Somehow we found ourselves near a small clearing illuminated by a full moon. The wiry grass reached almost to my companion's chin.

"Excellent inforia," he said, stroking a blade. Looking closer, I saw that this was not grass, but tapes, similar to the ones the first manikin I met had been burning. Only these tapes were green while the others had been a faded yellow.

Swishing softly in the fresh breeze, the

tapes seemed to be whispering.

Spots of moonlight slid across the old man's face as he turned his head.

"What kind of tapes are these?" I asked.

"Just ordinary perforated tapes."

"You mean information is recorded on them?"

"Naturally."

"But what information?"

"All kinds," answered the old man, shrugging his shoulders. He broke off a blade—sorry, a piece of tape—and tasted it.

"How does it taste?" I asked inanely.

"Ripe," answered the old man quite seriously. "Time to mow it."

"And then what will be done with it?"

"What? Why, it will be fed to the cattle."

"Cattle ... fed with information?" I was truly perplexed.

"What else? But the precise moment when the inforia is ripe must be caught. It sheds information if you're late, and then the tape is good for nothing."

"So you throw them away?"

"We burn them."

"Listen," I exclaimed. "I cannot understand anything. You people live on information, your animals are foddered with information—but what about real food?"

"Inforia is the only true food," answered the old man. "Doesn't everything in the world boil down to information?"

We were now strolling along a quiet, poorly lit street on which strange plants grew. I was on my guard: every bush seemed to be a con-

tainer of information, every tree—an information-block.

I could stand it no longer and shouted:

“Explain, at last, what is this information you speak of all the time?! Information is never just simply information—it has to be about something. So what is it about?!”

“What difference does it make,” answered the strange little man. “Does a machine question the source of the energy it receives? No, it does not. To the machine it makes no difference what motivates it—coal, wood, or, say, a controlled thermonuclear reaction. The machine demands calories, all the rest does not matter.”

“Well, some fuel may turn out to be unsuitable,” I muttered, utterly confused by my companion’s remarkable logic.

“Quite right,” chirped the old man happily. “You’ve hit the very crux of the matter. The same thing is true of inforia. It may also be unsuitable for man.”

“Why?”

“Plenty of reasons. For instance, it may be stale... In general, there is no product more delicate and more perishable. Sometimes the inforia is vitamin-deficient.”

“What do you mean?”

“Well, when it reiterates things that are common knowledge. However, the most terrible thing is falsehood. Have you ever been poisoned with false information?”

“Yes, I have... In a mild form,” I managed to articulate.

“Your luck that it was a mild form,” said

the old man. "Another hazard is choking on inforia..."

"Choking?"

"Yes, that may happen when the inforia is gulped down too hastily."

"Let's leave the machines alone and return to humans," I said. "Is it really possible for a living organism to be nourished on information alone?"

"So you don't really understand," said the old man sadly. "A whole hour I've been explaining to you that anything received from the environment by any living organism, the human body included, is reduced, in the final analysis, to information. Throughout his life man merely receives and digests inforia. Without it there would have been no living things at all, if you want to know! Without inforia the human race would have disintegrated and disappeared!"

"Oh, come, now..." I exclaimed doubtfully.

"Of course! The genetic cells—what are they but a clew of information including all the characteristics of the given individual, to be passed down from generation to generation, from ancestors to descendants?"

"Well, perhaps..."

"And memory—what is it if not an extensive depository of information?"

So the old man includes himself and his tiny folk among the human race...

"Destroy memory—what becomes of humanity?" continued the old man. "History, art, culture—they will all vanish. An ancient author once wrote a fable in which the Devil appears before a poor man and offers him all the wealth

of the world in exchange for one thing alone—his memory. The man agrees. The Devil does not deceive him: anything he is capable of wishing for the man receives. But, alas! Having parted with his memory he himself has lost his human aspect. And so,” said the old man, waving his hand, “memory is everything. But what is memory? There is nothing in it but information.”

“I think that I am beginning to understand what you are driving at,” I said. “So ordinary food, a slice of bread, say...”

“...is nothing more but a certain piece of information,” finished the old man. “Information for the stomach, for the nerve cells, for the intestine, and, in the final analysis—for the entire organism. But in this case it is coarse, low-quality information, primary information, one might say. Such food may be cleaned of admixtures and turned into pure information; blocks of such information are what we use for food.”

“Yes, I’ve tried them,” I said.

“Now to return to my initial thought,” went on the old man. “The machine is indifferent to the fuel it consumes if this fuel is of a proper quality. Well, man is also a machine, perhaps a somewhat more complicated one. Therefore it makes no difference to him what information he consumes if it is of a good quality. What need then for a go-between in the form of coarse food? Man must receive information in its pure, natural form. This we have achieved.” The old man’s voice took on a certain solemnity. “At the same time we have overcome a great

number of diseases associated with the gastric functions—and in general, the alimentary tract has been done away altogether.”

The world I found myself in no longer seemed as strange as it had at first. It was a world living by its own laws, laws that were perfectly logical in their own way.

However, there must be something in common between these people and my familiar old world.

“But what about money—you must have money, at least?”

“Money?” repeated the old man. “What’s that?”

“Money?..” I was bewildered. “Well, you can buy anything you need with money.”

“Here everybody gets as much inforia as they need. Take your own case, for example. You told me that you’d just had dinner in the central Infor. Did you pay this ... money for the information blocks?”

He was right. But I wouldn’t give up.

“How can you do without money?”

“We don’t need it.”

“But suppose you want to compare two blocks of information: which is the more valuable? With rubles and kopecks such a comparison would be quite simple. But without money...”

“Don’t you know that it is very simple to measure inforia?” asked the old man. “The unit of information is the ‘beat’. One beat is...”

“No lectures, please!” I implored. “I’m sick and tired of...” I looked around—the old man had disappeared.

Evidently, the information I had consumed

was working. I felt nauseous, an internal fire was consuming me, turning me inside out. I must have had some rancid information, or perhaps it had simply been false?

Miserably, I dragged myself along. Swaying back and forth, the little houses showed themselves through the fog and then were swallowed by it again. "Perhaps everything really does boil down to this information thing," I reflected, my head throbbing dizzily. "If one gets down to the bare facts... Do I demand anything but information from a student when I examine him? Knowledge! And knowledge is assimilated information. So when I fail a student it means that the information he received was not properly digested. When we read a book, is it not information we seek above all? Information about things we do not know yet, things that worry or interest us. And if it isn't there—we put the book aside in annoyance..."

I stumbled over something in the dim light and almost lost my balance. I picked up the thing—it was a porous stone, something like tufa. Another person might have flung it away, but, having learned by experience, I carried it to a street light. Of course! What else could one expect in this country? It was no stone at all, but a chunk of petrified information. I put it in my pocket. When I get back where I belong I'll tell them all about this Land of Inforia. My daughter—she, of course, will believe me implicitly. But should anybody doubt my word I'll show them this chunk. Then let them try to refute such material evidence!

"And what are all the great scientific discov-

eries," I mused, "isn't every one of them nothing but a new piece of information about our surroundings?"

I thought up more and more examples confirming the notion that everything in our world could actually be reduced to information. And then I imagined how in the near future schoolchildren might be given problems of the following kind to solve: "Two pipes lead into a swimming pool. The gauges of the pipes are given. How many hours will it take to fill up the pool if information flows out through one pipe and comes in through the other..."

I again found myself in the main street. Scarcely any people were about. I felt myself a stranger in this land of graceful little people nurtured on information.

So you may well imagine how glad I was when I noticed a familiar little figure ahead of me. It was Oll, and she was feeding some tiny little fluffy birds. Twittering loudly, they circled around the girl, the bravest ones pecking the crumbs—crumbs of information, naturally,—right from her palm.

"Oll!" I called.

"At last," said somebody's gratified voice nearby.

I turned my head.

"Lie still. You mustn't move," said a girl in a white coat severely—she seemed to have dived out of darkness. Her face was identical with that of the small girl who had just now been feeding the strange little fluffy birds from her narrow palms.

"Oll!"

"Yes, my name is Olga. Do you know me?"

"Of course I do. You are Oll from the Land of Inforia."

"Delirious again," said somebody worriedly.

"Typical mushroom poisoning," said another voice—a confident bass. "I'm afraid we'll have to flush him out again."

At the words "flush out again" I immediately felt much better.

"Where did you find him?" asked somebody.

"In the forest belt."

"Near the station?"

"Yes."

"He was lying no more than two paces from the tracks," said Oll.

"That was really a bright idea, friend—to eat raw mushrooms!" exclaimed a man's voice. "Here, drink this." I was offered a glass of pink liquid.

After drinking it I regained full consciousness. I stared at Oll. She turned away in embarrassment. It seemed to me that I need only make an effort and I would be back in that wonderful little country, in the town the streets of which I had just been roaming.

"Well, how do you feel?" asked the doctor.

Instead of answering I got up and walked a few steps from the bed.

"You're alright now," he said.

Oll smiled at me, and I understood that it was impossible to just get up and leave. Did we not have a secret in common?

"Olga," said the doctor, "see the young man to the station. He can still make the last train."

Putting my hand into a pocket, I suddenly felt something hard. I took it out—it was a strangely-shaped stone, its eroded surface seemingly covered with some kind of writing.

“Where is this from?” The doctor wrinkled his brows. “Curious...” He turned the stone about this way and that, as if trying to decipher the strange writing.

“The acidity in the soil has dissolved the softer admixtures of rock,” he finally stated, returning the stone to me. “That explains the designs.”

I said nothing, because more than anything in the world I detest skeptics and those who are wont to find simple explanations for any out-of-the-way phenomena.

ENDS AND MEANS





Prologue

THE KIDNAPPING

Posters announcing the arrival of the famous acrobat Ligo Staven were all over the town. Not that he was really as famous as all that. Indeed he was too much of a newcomer for his fame to have spread across the state frontier. Yet the experts predicted quite a future for Staven. No less significant was the fact that a small place off the beaten track such as Arborville was not exactly overrun with visiting stars from the capital.

One of the four scheduled performances Ligo already had behind him, and a number of inveterate circus-goers had recognised him in the street. They greeted him and raised their old-fashioned hats with a dignified air.

Ligo came out of his hotel and stopped to ponder for a moment. The wind was blowing dust and dry leaves down the street. The low houses on either side of it had a dejected look about them. The previous evening the hotel receptionist had pointed out, while handing him an enormous key with a green tarnish on it: "There are three things worth a visit in this town—the river, the town hall and the prison."

The street went downhill and Ligo guessed that it must slope towards the river. He stood still for a moment and then made his way slowly down, trying to wrap his raincoat tightly round him. It had become a habit for Ligo to take a walk before a performance and he

preferred to do this on his own. He would wander about the streets of an unfamiliar town, anticipating those blissful moments high up in the Big Top with bitter-sweet excitement, moments when his body would seem weightless and his heart would be filled with joy that never lost its poignancy.

He knew of course that today he would once more be working without a net: the inhabitants of Arborville were in that sense no different from the people to be found in other towns. Yet Ligo himself would have been unwilling to work with such safety precautions: he had confidence in his own ability.

It was difficult to say where that confidence stemmed from. Ligo had learnt the tricks of his trade on his own and, what was more, in such a short time that he had left even the professionals gasping, although the circus world was almost immune to surprises.

The lean young man had realised at once that acrobatics would be his true vocation: to be precise space acrobatics so-called, way up high in the Big Top.

Ligo never stopped to ponder on the risks he took leaping through the air at dizzy heights. At such moments he felt in command of every cell in his body, his power seemed to know no bounds... Later, with his feet on solid ground again, he would think back to the trapezes and rings and still sense the freedom of flight, quite unlike anything else he had ever known.

Ligo felt sure that there was still room for

his skills to develop. He had firmly resolved that after this tour which should leave him with some money to spare he would put off any further performances for a time and settle down to training in earnest. The “celestial acrobat”, as he had been christened by some reporter along the way, was determined to achieve perfection in his field. When it came to determination, Ligo Staven took a lot of beating...

There were still three performances to go. Three more days and then he would leave the drab little town, to knuckle down to what he now regarded as his most vital task.

If it had not been for the money Ligo would never have dreamt of undertaking such a long tour. He realised that the path to perfection which beckoned all the time was a difficult one, and that for that very reason time had to be treasured.

Yet the tour had had its positive side. Where on earth would he otherwise have seen such a quaint little place as Arborville? Prior to this he had always thought that towns of that sort could only still be found in very old movies.

The spirit of the modern age seemed to have passed those old walls by: it was incredible to think that in Arborville the twenty-first century had actually dawned.

Ligo Staven walked along just following his nose, now and then turning a curious glance towards the street-signs.

After turning an unexpected bend in the road Ligo was suddenly confronted by a magnificent view. The houses clustered on the steep

slopes were huddled together and seemed to look timidly down to where the winding, autumn-tinted river sped—as by now he knew—towards the ocean.

Ligo walked over to the stone parapet which had at some time been picked out in white paint. Beneath him Arborville's park stretched along the bank trying hard to retrace all the bends in the river.

He obeyed a sudden whim to go down... The funicular railway had clearly long since forgotten the heyday of its youth when it had laboured to take the townspeople up and down the slope. The once green cars were now incredibly shabby and a friendly clump of acacia bushes had since grown up between the sleepers. The shouts of small boys at play could be heard coming from the cars which had long since lost their doors.

After pausing to admire the pale sunset Ligo started making his way down the steps. He tried not to hurry knowing that he needed all his stamina for the evening act.

There was hardly anyone in the park: it was not the kind of evening that beckoned people out of doors. As Ligo walked along the bank, the fallen leaves rustled beneath his feet. He noticed a park bench that had been moved and now blocked the path. It must have been brought there by a young couple as they whiled away a summer evening. Indeed the spot had most likely been a secluded one until autumn had stripped the leaves from the trees.

Ligo brushed away an elm leaf of pure gold

from the bench and perched on the edge. He looked at his watch: there was no need to hurry as yet.

Then two men appeared from out of a bend in the path. They walked without hurrying and both stared hard at Ligo. He was filled with sudden misgiving and felt sure that he had seen them somewhere before.

It hardly came as a surprise when they left the path and walked over to the bench where he was sitting.

One raised his hat politely and asked: "May we?"

"Not a bad spot for a walk, is it?" remarked the other with a smile, taking out a cellophane-wrapped packet of cigarettes out of his pocket.

"You're Ligo Staven, the acrobat, aren't you?" inquired the first of the two.

By this stage Ligo felt he could ignore them no longer. Hardly opening his mouth, he replied: "Yes, I'm Ligo Staven."

"Pleased to meet you," the strangers intoned in chorus.

"I'm performing this evening," Ligo went on, "and I'd rather be on my own."

"We wouldn't keep you," the younger of the two assured him. "It was just that I and my friend decided to find out what an up-and-coming star looks like at close quarters, so to speak."

They sat down on the bench and the broad-shouldered young man began to smoke. With a polite wave of his hand he swept to one side the stream of pale-blue smoke.

Ligo could not stand people smoking. He made as if to rise.

“Now then!” remonstrated the older of the strangers casting a threatening look at his companion. “I beg you to forgive him,” he went on, placing his hand on Ligo’s shoulder. “We have, after all, come a very long way, specially to see you.”

“Seeing me is no problem. This evening at eight I shall be giving a performance at the circus,” Ligo replied coldly, making another attempt to rise from the bench.

“Wait a moment I beg you,” said the stranger, stopping him in his tracks again. “To see you perform is of course a tempting prospect, but what we’re interested in is something quite different.”

“Something different?..” inquired Ligo automatically.

“Let’s get down to business right away, so as not to delay you,” the stranger suggested, and without waiting for an answer, continued. “You see, we want to talk to you about something very important.”

Ligo shrugged his shoulders, by way of reply.

“What do you think about the properties of gravitons?” inquired hurriedly the man sitting next to Ligo.

“What d’you mean ... ‘gravitons’?”

The strangers exchanged glances.

“Forgive me,” began the man who had just asked the unexpected question. “We are not acquainted and you are right to view us with suspicion. Let me introduce myself. I am Giltsoni, Alvar Giltsoni. You’ve heard the name, I expect?”

Ligo shook his head and then looked over

towards the second man. He was sitting there leaning back against the bench, the hand holding the lighted cigarette flung far to one side. His face wore a distant expression as if he had long since ceased to pay attention to what was going on. One might have thought that before the young tough's eyes stretched not a sombre autumn scene but his own private paradise—so dreamy was his gaze.

“Wake up!” demanded Alvar Giltsoni as he shook his friend and then pulled the cigarette from his hand and stamped it out.

“Er ... er ... ready for action.”

Giltsoni introduced the second man as his assistant Abor Isav and then went on: “Physicists tell us that absolute zero is unattainable, isn't that so?”

“Yes, so I've heard,” admitted Ligo.

“So you've heard that too... Well, just imagine, dear Ligo. This young stalwart here has been able to refute what the physicists say. What d'you say to that?”

“Incredible,” said Ligo in a tone of polite surprise.

“You wonder probably, how he achieved that?”

“Yes, how?”

“He demonstrated that absolute zero is within our reach through his own behaviour,” announced Giltsoni triumphantly, and in response to the bewilderment in the wide-staring eyes of Ligo he went on to explain: “Abor Isav is an absolute zero, when it comes to physics,” and he laughed pleased with his own witticism. .

Abor Isav sat there looking bored as if the subject of the conversation had no bearing on him.

"You probably wonder why I, a physicist, keep him on? A logical question. You see the thing is that while completely at sea in physics Isav possesses a number of other talents," explained the talkative Giltsoni. "For a start he does what I say. He shuts up like a clam when required to. When it comes to physical strength, well there's just no stopping him, is there?!"

Looking as bored as ever, Isav put his hand into his pocket and pulled out a coin which he casually proceeded to bend between the fingers of his bare hand. Then he handed the coin, now bent double, to Staven.

"Splendid," countered Staven, trying unsuccessfully to unbend the nickel five-cent piece. In his work as an acrobat he was used to coming across various displays of strength and agility and respected them, rating them almost higher than other human achievements.

"Not a bad number," said Staven. "I think I've caught on to what you're after, at last... Is it work you're looking for? All right then, just come along at the beginning of the performance. I shall try and talk to the director of the circus, although I don't know him very well I think he's at this very moment planning to thrill the inhabitants of Arborville with a new act."

"D'you hear that, Abor?" remarked Giltsoni giving his friend a nudge in his side. "There'll be a little something to see you through hard times after all."

“And what about you?” asked Ligo.

“What d’you mean me?” asked Giltsoni in surprise.

“What can you show us? Is it the horizontal bar, a pyramid number, or the rings? Or perhaps, space acrobatics?”

Giltsoni frowned and said in a gloomy tone: “You’ve had your fun and now let’s call it a day. So you really mean to say that you’ve never heard of Alvar Giltsoni, do you?”

Ligo responded to the question with a guilty smile, saying: “I can honestly say that I haven’t.”

“I see,” muttered Giltsoni drumming with his fingers along the back of the bench and adding with bitter irony: “So that means you haven’t read my articles?..”

“Articles on the circus?”

“Four articles on the unified field theory,” announced Giltsoni with a sense of importance. “Just think hard for a moment, then you’ll see that it’s important.”

Ligo shook his head and said: “I haven’t read anything like that.”

“Perhaps you don’t read the *Physics Journal* at all, eh?” inquired Giltsoni with a leer, as if he had said something incredibly funny.

“I’ve never set eyes on it,” said Ligo.

“Never mind,” went on Giltsoni, giving him a slap on the knee. “If you don’t trust us, it’s your own affair. I suppose in a way you’re right not to. But let’s talk things over properly...”

Ligo rose with real determination this time:

“I’m sorry, I have to go.”

“But there’s another hour before the

performance,” Giltsoni reminded him.

“I need to check the trapeze...”

“Sit down, young fellow,” said Giltsoni and this time pulled hard down on his shoulder.

“What do you want?”

“Our talk’s only just begun.”

Ligo looked at Abor Isav’s large sinewy arms, which he flexed almost involuntarily, and then cast a glance down the deserted street ... he had little choice but to stay.

No, he thought, they are not drunk, although Abor has the air of a junkie.

“Yes, there really is some time left. I’m at your service,” Ligo admitted.

“That’s more like it, young fellow,” said Giltsoni with an approving nod. “We know everything about you already. Even things you yourself are not aware of... But that’s not really the point.”

Ligo looked down at his watch, while Giltsoni went on: “Let’s start with what’s most important. What do you think about the unified field theory?”

“Field?...” echoed Ligo.

“Yes, for heaven’s sake, f-i-e-l-d,” reiterated Giltsoni and straightened his hat with an impatient gesture. “Have you never thought to yourself that work on the unified field theory has ground to a halt?”

“I can’t say I have...”

“And what have you to say about the discreteness of electromagnetic fields?” Giltsoni went on, clearly growing more and more impatient.

Ligo mopped his brow, and pointed out

that he could be of no assistance to them in such matters.

“Perhaps he’s already sold his idea?” suggested Isav.

“If he had he would long since have abandoned his stupid acrobatics,” Giltsoni snorted.

Ligo was on the alert by now, looking for a moment when he could jump up and make his get-away.

“Perhaps his acrobatics is just for camouflage?” suggested the broad-shouldered Abor. “Or simpler still just a hobby?”

Giltsoni sent a searching look in Staven’s direction.

“I can see that you’re honest people...” began Ligo.

“Don’t try and get me off balance,” interrupted Giltsoni. “It’s not playing the game to keep discoveries hidden—it holds back the march of science. We physicists are just one happy family. Wouldn’t you agree?”

“But I’m not a physicist,” Ligo managed to protest at last.

“Not a physicist—so you’re not a physicist,” echoed Giltsoni in a conciliatory tone. “There’s no point in arguing over trifles now, is there?”

He then made a sign to Abor who brought out a packet of cigarettes and held it out to Ligo inviting the acrobat to help himself.

Ligo shook his head and said: “I don’t smoke.”

“Oh yes, it’s not good for sportsmen, is it?” remarked Giltsoni.

Abor himself began to smoke inhaling deeply as he did so. When he was putting the packet

back into his pocket Ligo jumped up from his seat. Yet Abor had been prepared for this move and bending forward with a threatening air he blew a cloud of acrid smoke straight into Staven's face.

The acrobat went weak and unable to resist, he sank back onto the bench. His arms slumped down at his sides and his head flopped over on to one shoulder.

"So much for that," said Giltsoni. He rearranged Staven in a more natural pose, now that he had fallen asleep, in case a passer-by should chance along and then he took off his own hat and squashed it down over the victim's face.

By this time the three men could have appeared from the distance to be no more than a group out on a spree, one of whom had drunk more than the others and was now sleeping.

Giltsoni looked round and saw that the park was still deserted. He commented that there was no better place for a walk. "But now to the main question: 'Is this the man we need?'"

Abor made a sign as if to say that there could not possibly be any doubt. But this did not appear to convince Giltsoni one hundred per cent.

"Are you sure that Big X got it right?.." he asked looking at the slim and youthful figure of the acrobat. "It's our last chance."

"When I was asking Big X for information I followed your instructions right down the line, Boss," came Abor's phlegmatic reply.

“All one can do is hope that you really did... Well, that’s enough for now, off we go!”

With a strong heave Abor Isav lifted Ligo Staven. The acrobat’s face looked utterly childlike. Abor gave one of his cheeks a slap and Ligo opened his eyes only to look around him in bewilderment.

“Morning!” said Abor. “Rise and shine!”

Giltsoni gave Staven an impatient push. Staven took a step forward still with the same glazed look on his face. He had not yet quite come round from the effects of the strong drug.

Abor Isav and Giltsoni took hold of Ligo by the arms—he was unable to walk unaided—and moved slowly in the direction of the park exit. Staven’s legs had turned to cotton wool and kept giving way under him. He moved forward like some kind of robot, but a robot in need of repair. He kept stopping after every two or three steps.

Giltsoni looked round anxiously every now and again. The plan which had been going so smoothly at the beginning could well be ruined now through some chance encounter. Whatever people might say, kidnapping someone in our modern age was no easy undertaking!

To make matters worse Abor suddenly started to sway from side to side in a suspicious manner.

“Admit it, you wretch: you went and inhaled too much again?” Giltsoni asked.

“Honest to God ... only once,” muttered Abor guiltily.

“We’ll discuss you later, that’s enough for

now," Giltsoni cut him short.

They went past the deserted terrace of the summer cafe now strewn with leaves and came out into the main walk that curved steeply uphill. It was growing dark by that time and the springy plastic of the park walks was slowly being lit up. The bare branches of the trees were set off against the dark grey sky like so many cut-outs.

"There's a fine idea for you," commented Abor making his way along the plastic path, now flooded with ever brighter light.

"Fifteen years from now and they'll be thinking up things far more weird and wonderful," grunted Giltsoni by way of reply.

Abor made no attempt to answer. Neither did the boys playing in the abandoned cars of the cable railway pay any attention to them. The worn treads of the steep steps they were climbing by this stage hindered their progress.

"Hurry," urged Giltsoni. "He's just taken a breath, he'll be coming to soon."

In the clearing where they had left their ornithopter there was not a soul to be seen. After all who would find anything to do up there in that wilderness?

The machine's overwings were swaying about and creaking mournfully in the wind. Giltsoni patted the thin dragonfly-shaped body of the machine and said: "Here's someone who hasn't let us down yet ... not like your specially chosen geniuses."

"Big X's not mine," Abor corrected.

With considerable difficulty the two of them proceeded to push Ligo through the

open hatchway of the ornithopter, which meant coping with a short, three-step gangway.

“All we need now is to prise out of this no-good acrobat the world equation formula,” said Giltsoni as he leant back into the pilot’s seat.

The machine soared into the dark sky, its upward movement pushing the three men back into their seats. Staven flopped back into the far corner of the cramped cabin and there froze in a ridiculous pose, his arms thrust out sideways.

The autopilot steered the plane towards the Rocky Mountains as previously programmed.

CHAPTER I

THE IMPERATIVE NEED

FOR NEW IDEAS

The reflected light from the torches made oily-looking patches in the water. There was hardly any wind and the tall tongues of flame hardly wavered. One torch that had been set up at the edge of a raft had been knocked over by a dancing couple: it had fallen with a hiss into the water and left behind it a cloud of whitish steam.

By now of course no one could remember who had originally had the idea of holding the graduation banquet by torchlight on purpose-built rafts of sawn logs covered over with thick plastic sheeting to provide a suitable dancing surface.

The band, consisting of seven enthusiasts from the new physics graduates, had taken up its position on a small raft some distance away, close to the huge dark mass of the disused lighthouse. Waves of sound carried music from the band's raft to the dancers, and a cheerful racket reverberated hour after hour round Dead Whale Bay.

The couples on the large raft in the eerie light of real pitch torches looked like some monstrous four-legged creatures from another world.

The long table had been set up at the very edge of the raft so as not to get in the way

of the dancers. When everyone had clustered round the food, the raft started to lean ominously which gave rise to a new burst of excitement.

“Everyone down to the bottom!”

“Who’s for fish-food?”

“Greetings from the Dead Whale!”

“It’s beautiful, isn’t it?” whispered Shella to her companion.

“What’s beautiful?” he inquired, breaking off a large crab claw.

“Well, all this...” Shella replied, stretching out her arm in a vague gesture: “The smoking torches by night, dancing out on a raft...”

Her partner merely shrugged his shoulders and said: “What’s beautiful about it? Artificial atmosphere built up by endless monotonous movement and alcohol thrown in for good measure.”

“Alvie, give over,” protested Shella, almost choking with disappointment.

“All right then, I was just joking,” muttered Alvar to boost her spirits.

“Your jokes don’t make things any brighter.”

“...It’s the Family’s last day together,” shouted someone at the far end of the table.

“You mean night,” chipped in the others.

“All the more reason to make the most of it!” retorted the first speaker. “And this raft of ours, my friends, is not a raft but a ship taking us out armed with our new-found knowledge into the future...”

“Hip-Hip...”

“Let’s drink to the university!”

“The Alma Mater!”

“Finest of the fine!”

“Let it go up in smoke!” came a strident voice from the other end of the table.

“Just a minute!” called the “master of ceremonies” tapping his champagne glass with his fork in a vain effort to demand quiet. “Something else needs to be said.”

A champagne cork popped out of its bottle somewhere and after describing a wide arc through the air, plopped into the water.

“So our ship’s sailing forth into the future, is it?! It’ll soon have to make do with the thunder of cannon instead of popping champagne corks. May none of us ever sink so low as to provide fodder for them...”

The end of the speech was drowned in discordant cries.

“Give over with that propaganda!”

“Who’s paying you?”

“Academic rubbish!” (Among the students of that year it was impossible to fall much lower than “academic”.)

Shella sighed and mused: “Surely we can give politics a miss for today at least!”

“Politics is for the nonentities,” commented Alvar. He frowned and added: “The only physicists who take it up are those who don’t count for anything as scientists.”

“Or those who are in the pay of the bodies employed to maintain public order,” added someone sitting nearby.

“We, men of the twenty-first century...” droned a drunken voice in the darkness.

Someone proposed a toast to Mark Nusch. Then followed an objection to the effect that he had given up science as a career.

“Well then, let’s drink to Alvar Giltsoni! He hasn’t abandoned science yet, that’s for sure.”

Several voices took up the call:

“For the local genius!”

“For our favourite savage!”

“And his world equation...”

“That he’s bound to discover in the end,” concluded a tireless tenor.

Pushing aside some of his rather tipsy fellow-students, Alvar made his way forward with difficulty to the head of the table. The noise and excitement died away. The somewhat eccentric Giltsoni was one of those people from whom you never knew what to expect.

“I accept your toast,” Alvar announced in resonant tones and shook back his mane of hair. “The world equation is something worth devoting one’s whole life to. Even if I had ten lives to live, I would without hesitation devote them to the work begun by Albert Einstein.”

The passionate conviction behind the young man’s words made the faces of the young physicists assume a more serious air.

Alvar blushed and then went back to his seat by Shella. She was amazed. Usually—and by now she and Alvar had known each other for four years—he was a man of few words, reserved and shut in on himself. Words had to be dragged out of him. Shella took Alvar’s arm and they left the table. By now the musicians were playing something rousing.

“Why is the band on a separate raft?” she asked. “Couldn’t they have been found a place here?”

"The swaying of the raft would have made things difficult for them," explained Alvar. After his sudden outburst he was his ordinary uncommunicative self again.

The couples moving in time to the music made the enormous raft shake somewhat and the light of the torches was flickering. The more distant stars were starting gradually to fade: dawn was on its way.

As she circled on the dance-floor Shella held tight to Alvar and half closed her eyes. Today at last he must be going to say those all-important words after which they would be together for always. Those long-awaited words...

All of a sudden Alvar stopped in his tracks.

"What's the matter?" Shella asked in bewilderment.

"I'm tired."

"Let's go and sit down," she suggested. They made their way out of the crowd and sat down on part of a log that had been left over after the raft had been hastily put together for the banquet.

"It was on rafts like these that the primitive Polynesians used to set out across the ocean," remarked Alvar.

"Their days are over," reflected Shella in pensive mood, looking at the hungry tongues of flame. "What's the point of rafts now that we've vessels throbbing with atomic power!"

"The days of heroic exploits aren't over yet though ... not yet," Alvar assured her looking out of deep-set eyes that appeared like dark hollows in his face. "Don't you see

though... Men's goals can be great or base. There's no point in wasting time on the second variety. As for the great ones ... all means for achieving those are worthwhile."

"But what if the means are base ones?"

"The end justifies the means..."

"That's too much for me to bother my head with..." said Shella quietly. Alvar hardly heard her against the waves of music and the noise made by the students all out to enjoy themselves. They both fell silent.

"Tell me, Alvar," Shella began, looking at the dancers, "can there be a goal like that for each one of us?"

"No," laughed Giltsoni with a touch of contempt in his voice. "Those are only granted to the chosen few."

"And what about the rest of us? Are we to live without any goals?" said Shella in a timid attempt at a joke. It was rare for Alvar to deem her a worthy partner in serious conversation: for the most part he restricted himself to jest.

"They provide the habitat."

"Habitat?"

"A bird can't fly in airless space. Air is the habitat it has to have. In the same way the mediocrities or the grey mass of ordinary people, the majority of the human race forms the stepping-stone that the genius uses to attain the supreme heights of absolute knowledge."

"So, as far as you're concerned the goal for the majority is to provide a stepping-stone for the geniuses?"

“Precisely.”

“That’s an old story,” remarked Shella casting a sideways glance at him and wondering whether Alvar was making fun of her.

Giltsoni’s face was quite serious though as he replied: “What of it, that’s the way the world’s made.”

“But how is a person to know what his goal in life is? Wait for a message from on high?”

Alvar turned his face round towards Shella’s and said: “A message from on high is nonsense of course. The individual determines his own goal in life.”

As they sat there some boats were tying up at the raft and others setting off in the other direction: two-way traffic between the party and the shore was uninterrupted.

Alvar looked at his watch and frowned as he muttered: “That’s strange.”

“Have you got to leave somewhere in a hurry?” Shella asked.

“No, not that. Someone was meant to be coming to see me here and he hasn’t arrived...”

“Is he late?”

“Yes, and that’s bad. I hope that he’ll still turn up though.”

“Who is it?”

Alvar shrugged off the query with a vague answer: “A friend of mine.”

“But I know everyone of your friends,” objected Shella. “There aren’t that many.”

“This one you don’t know. It’ll be interesting for you to meet him though.”

Shella pricked up her ears and asked: “Did you arrange to meet him here?”

“In a manner of speaking,” said Alvar with a wry laugh patting his pocket the while.

Shella looked at him in amazement but did not press the point: Alvar had recently become very irritable and could fly off the handle at the slightest thing, and she was anxious to avoid his outbursts at any cost.

“At last!” exclaimed Alvar looking at a boat that was just tying up at the raft edge.

A man climbed up out of the boat, looked round the raft and on catching sight of Alvar moved over in his direction, without paying any heed to the dancing couples. He was incredibly broad in the shoulders and walked with an inordinately heavy tread.

“Hello, Boss,” he said to Alvar and then turned his gaze at once to Shella, unnerving her with his sombre unblinking stare.

Alvar nodded in greeting.

“For some reason I thought you’d want to see me, and to be precise, here and now,” went on the broad-shouldered newcomer.

“Quite correct, my friend. Were you asleep?”

“What d’you mean ‘asleep’?” protested Alvar’s friend with raised eyebrows. “Since early evening my head’s been full of all sorts of nonsense, that made sleep right out of the question. I don’t know why but I decided that the ornithopter needed preparing for a long flight. I was busy setting things up in the hangar until dawn. Then I rushed like a mad thing out to you on the raft.”

“All very right and proper,” confirmed Alvar, and Shella sensed a note of approval in his voice.

The tough-looking newcomer kept shifting his weight from one leg to the other which made the raft rock. "You'd think he weighed half a ton," thought Shella to herself.

The stranger stretched out his hand with a smile to Shella, saying: "Abor Isav."

"Abor Isav?" repeated Shella with a questioning note in her voice. "I've heard your name somewhere before."

"Quite probable," explained Alvar. "The papers were full of this prepossessing fellow a couple of years ago."

Shella frowned, unable to place him.

"Let me fill you in again with my story," Abor went on with a smile. "Two years ago I was working as an assistant in Mark Nusch's laboratory. Have you heard of that well-known physicist at the university?"

"Alvar's given me an earful on the subject."

"Well, you see," Abor went on, "the installation there blew up and I got such a dose of radiation that I was a certain candidate for the next world. They managed to get me to the clinic though..." Abor looked over towards Alvar and fell silent.

"What happened then?" asked Shella.

"I was in that clinic an eternity. I was lucky to come under the care of the great Menzies himself. My heart and liver were replaced. They were a long time wrestling with my head, but in the end fixed me up with a positron brain, the latest type and the best money could buy. Why are you looking at me like that? I really am half robot," commented Abor with a note of bitterness in his voice.

“They haven’t learnt to make real robots yet...”

“Forgive me,” murmured Shella. She started pondering over the amazing advances in medicine that were being made before her very eyes. Everyone still had vivid memories of the experiments made in the twentieth century with heart transplants. Those had been disappointing experiments, one after another they had been ended in failure. The surgeons kept being thwarted by tissue incompatibility: sooner or later the recipients would reject the foreign tissue and die. Today though heart transplants are everyday occurrences, albeit expensive ones. Yet even now simultaneous heart and liver transplants followed by insertion of an artificial brain seemed to be taking things too far... It was not for nothing that Menzies was referred to as the greatest medical luminary of the solar system.

“It’s a trifle, I don’t take offence easily,” said Abor. “They got all that apparatus ticking inside me and then things started happening that the surgeons and bio-physicists could not have foreseen.”

“With the heart?” asked Shella.

Abor shook his head and said: “My heart worked as required, and the same can be said for my liver and brain. The trouble was that they didn’t synchronise, each organ worked away on its own so to speak: the heart didn’t obey the brain’s signals, and the brain didn’t really respond to the impulses it received from the nerve cells and so on.”

“What d’you mean?” gasped Shella.

“The trouble was that no one had had so

many bits replaced before,” explained Abor. “It was the first time round and the medics didn’t make provision for everything, it seems.”

“Is everything all right now though?”

Isav replied with a smile: “As you see me before you!”

“Was it Menzies who put you to rights?” Shella asked.

“No, Menzies backed out at that stage,” said Abor with a shake of his head: “My life I owe to Giltsoni.”

“That’s enough, Abor,” Alvar cut him short in clipped tones and pushed a torch into the water that had been smoking near the stump on which the three of them had been sitting.

“The Boss gave me a good service just like some old banger,” said Abor. “He took months over it, even going without sleep some nights.”

“Must you use the word Boss?” Giltsoni turned on him sharply.

“I’m sorry, Alvar. I don’t really know myself why I got stuck into that term Boss,” apologised Abor guiltily. “You see, ever since the clinic that kind of thing often happens to me,” he explained to Shella. “It’s as if someone’s whispering in my mind, saying—Do this, do that. Or some little word or other takes root and gets stuck like a splinter.”

“It’s a real miracle that you’re still alive,” exclaimed Shella in amazement. “And you’re more secretive than I thought,” she went on talking to Alvar: “You never said so much as a word to me about saving someone’s life.”

“There was nothing to it,” said Alvar. “What’s heroic about cramming poor old Isav full of relays and then establishing radio contact with retroaction between the two? Bob’s your uncle after that!”

“D’you still have any pain after the transplants?” Shella asked Abor.

“Well, how shall I put it?..” muttered Isav, suddenly at a loss for words. “Complete happiness is probably not to be found anywhere. It would all be all right if it weren’t for the pains in the back of my head that torture me at times. Once they get started I’d almost rather keel over. It’s as if someone were pushing a red-hot needle into my brain. Just now it hit me when I was planning to come over here to see Alvar... Then it let up.”

Shella sighed in sympathy and asked Alvar: “Is there really nothing that can be done about that pain?”

“I’m not a surgeon, just a physicist,” answered Giltsoni sharply. It was clear that he was not relishing this conversation.

“There is one way to dull the pain...” Abor began.

Giltsoni lifted a threatening finger in his direction and Abor stopped in his tracks. Then he asked: “Is the ornithopter ready?”

“Yes.”

“Have you loaded it up?”

“Everything’s on board. It suddenly occurred to me that we ought to take...” Abor began.

“And did it occur to you where we shall be flying?” cut in Giltsoni.

“To the Rocky Mountains.”

“Spot on.”

“And some kind of corny name— ‘Crow’s Nest’? I can’t get that out of my head either,” complained Abor. “But I’m damned if I can remember what kind of nest it’s to do with though.”

“You needn’t worry, Abor,” Giltsoni reassured him. “There’s no nest yet, but we shall build one.”

Abor wiped his forehead, and thought: “What the hell am I doing out here, on this raft? I must be mad!”

“You came here so that I could be sure everything was in order before the flight.”

“I still don’t get it...”

“Understanding is not something required of you,” laughed Alvar condescendingly. “Get back to the ornithopter and wait for me.”

After taking his leave of Shella in a somewhat clumsy fashion, Abor went over to the boat through the now noticeably smaller group of dancers.

“A strange friend you have there,” said Shella in a pensive voice as she watched Abor get into the boat.

Alvar shrugged his shoulders, saying: “All people are strange.”

“Why does he call you Boss? Is he just being funny?”

“More likely it’s just a natural sense of gratitude. D’you think that was easy synchronising the functions of the transplanted organs? I spent several months sitting over circuit diagrams, and nearly went broke...”

"And what is it that he dulls the pain with?" Shella asked.

"Drugs. The strongest money can buy. They don't have the same effect on him as on other people."

"Why?"

"Because the alveolae in his lungs are artificial," Giltsoni explained.

"You treat your friend as if you really were his boss and he your slave."

"Well what d'you think? I went to all that trouble, and for nothing."

"Aren't you afraid that the slave might rebel?" Shella asked.

Giltsoni laughed derisively and said: "Just let him try!"

"He's ten times stronger than you are."

"That doesn't change anything. Shall we dance?"

"I don't feel like it. I don't like the way you treat Abor," Shella said.

"You haven't gone and fallen for him, have you, by any chance?"

"What are you trying to do, rile me? It's not worth it. I'm not going to quarrel with you," Shella went on in a soft voice. There was a pause and then Shella asked quietly in a break between two dances: "But just a moment, are you really planning to fly away to the Rockies?"

"Yes."

"Why?"

"There's work to be done." Then Alvar looked down at the girl and added: "Work, that is more important to me than anything else in life."

"And I didn't know anything about it..."

"It's just how things have turned out, Shella. Don't be angry, I'll explain everything... You see I've got to choose: it's you or the world equation."

"Choose?" asked Shella in bewilderment. She felt she must have misheard.

"I had a long talk with Menzies yesterday. I asked him to give me a thorough check-up."

"Don't you feel well?" asked Shella anxiously. "Are you ill?"

"It's not that. I decided to assess my brain's potential, to find out the limit of my capacities for example. Menzies gave me a good deal of his precious time."

"What did he do?"

"He measured my body functions and drew some graphs. Then he said: 'Young man, there is no doubt about it, you show signs of genius. It would be a pity if they didn't come into their own, but that could happen all too easily.' 'Why?' I asked. Menzies went on to explain that I had an unfortunate constitution, of a rare kind. Then he asked me to have a look at a particular trace and showed me the printout which had just emerged from the diagnostic computer. It showed a downward curve crossing a horizontal red line. He explained: 'The red line represents man's mean mental capacity. Just look how far above it the peaks in your trace come.' When I pointed out that the curve sloped downwards, he went on to say: 'Precisely, you've hit the nail on the head. The high point of that reading occurred when I switched on the apparatus and left you on

your own, alone with your thoughts. The room as you see is shielded, so the isolation is complete. But as soon as I came in, the peak vanished like a lump of sugar in a glass of hot tea, disappearing almost to nothing. Now I hope it's clear what I'm getting at? The structure of your nervous system is such that absolute solitude is an essential condition for the full flowering of your talents. I stress *absolute* solitude. As long as you continue to maintain contact with other people, whoever it might be, you will not attain anything above average in the course of your research."

"Did you believe him?"

"Well, I see that path as my only chance, Shella. Climbing up into some kind of ivory tower and living there..."

"For how long?"

"A year. Perhaps ten."

"Or your whole life?"

"Perhaps even that long."

"So, you'll be up there in the mountains completely cut off from other people," said Shella.

"My link with the outside world will be Abor Isav. Now d'you see why I need him?"

"What about Menzies' condition though?"

"Abor has a positron brain: he doesn't give off alpha rhythms like ordinary people."

"I see, you've thought it all through. It's just me that's been forgotten," remarked Shella bitterly.

"I'll come back to you when I've cracked the equation," said Alvar, but his words had little conviction about them.

“So you’d have me wait for you. A year? Ten years? My whole life?” Shella looked up at Alvar, her eyes full of tears. “Listen a moment, everything has a price. I’ve got some savings... You could buy your solitude wherever you chose, even in the centre of a large town, a house with sound-proof walls in the middle of a thickly wooded park behind a wall. What about it?”

“It’s not the same,” said Alvar with a shake of his head. “Alpha waves disregard all barriers. The only hope—and this is how Menzies sees it—is that they lose their strength given sufficient distances.”

After a brief silence Alvar went on: “Einstein spent over half his life working out the unified field theory. He accomplished a great deal but failed to complete the great work—death got in the way. I believe that it is my destiny to carry through to the end Einstein’s theory—the most amazing construct of the human mind. Surely to achieve that end any means are acceptable.”

* * *

A grey mist was swirling over Dead Whale Bay and the sun would be popping up over the horizon any moment. All the faces round-about looked grey to match the mist. The excitement of the party was rapidly sinking.

The band on the adjacent raft stopped playing. The lighthouse in the distance no

longer appeared so enormous and full of mystery. It seemed smaller and not so far away.

"Shall we go?" suggested Giltsoni.

When they got out of the boat onto the shore Alvar walked a few steps in the direction of the port without saying a word. Alvar tried to gauge Shella's mood, but just could not make it out at all.

"So we're to separate?" she said at last with a voice struggling to stay calm. "You'll be off to your friend to make ready for the trip?"

"Let's spend today together," suggested Alvar. "Let's go into the country and walk."

"So it's time for goodbyes," said Shella wryly. "When have you decided to leave?"

"Tomorrow."

"So soon?" Shella stopped in her tracks. "How can we go strolling about? You've only got one day to get everything ready."

"The articles and books I need and my own notes I've already packed and Isav will see to the rest," replied Giltsoni.

"What if he makes a mess of it and doesn't take the things you want?"

"He won't. He can read my thoughts," laughed Giltsoni.

They walked past the port and went over to the aerobus stop.

"Where shall we go?"

"What difference does it make?"

The approaching aerobus came down to where they were standing with a steep swoop. It came to a standstill held half an inch above the asphalt on its cushion of hissing air. The two of them said nothing for a long time deli-

berately looking down at the scene below them. If viewed side-on the path traced by the vehicle formed a series of arcs, each curve the same size as the one before. After a short warm-up the aerobus would surge upwards following a trajectory just like that of a stone thrown through the air. Then thanks to a precisely calculated impulse it would land in the appropriate place, pick up new passengers and set off again.

The machine was approaching the centre of the town now and with each leap the houses grew taller. Finally, when the houses were too high for it to leap over them, the aerobus started flying between the buildings like a bird in a narrow ravine.

Pointing to an enormous building that stood out even among its fellow-giants Shella said: "They say that in houses like that people can spend their whole lives without ever needing to go outside."

"Well, and what about it?" responded Alvar.

"But that's terrible to spend your whole life in a concrete box, only seeing the blue sky and vegetation through the window..."

Alvar merely shrugged his shoulders and said: "It depends what you're used to, I suppose."

They got out at the last stop and walked along next to a wall that sparkled colourfully in the rays of the morning sun.

"I've spent all my life in this town but I've never been out as far as this wall," said Shella. "Have you been here before?"

"No."

Shella trailed her finger along the rough surface of the wall and said with a sigh: "It's nice here. Not a soul about, the air's cleaner and there's more green. Thanks to the wall the town's stopped spreading."

"On the other hand it's still growing upwards and into the ground."

"But it can't go on like that indefinitely."

"That's why the town will die sooner or later."

"The town will die?" queried Shella. "How d'you see that happening?"

"Well, just think a moment. Man is mortal, isn't he? Over the course of time harmful information gradually builds up in his cells. For a number of reasons various deviations appear within his cells' memory and these are then reproduced. Cutting out the jargon, various ailments start getting the better of man and eventually lead him to his grave."

"Sometimes diseases are cured."

"Yes but then the one that has been cured is followed by three new ones. But that's not the point. One way or another man will die. Even if he reaches an advanced age—what difference does it make in the end?"

"But what's this got to do with towns?" asked Shella.

"The town is also an organism. A single organism contained within a natural or artificial framework. It is born, grows, matures and then it begins to devour itself."

They sat down on a wrought iron seat, whose shadow sloped down towards the pond in which two, far from snow-white

swans were swimming.

"It must be cold there," said Shella.

"Where?" asked Alvar, losing the thread.

"In the Rockies. I just find it hard to imagine how you're going to exist up there."

"I do too," admitted Alvar. "But that's not really so important, is it? With Abor's help I'll build a refuge up there and get along somehow. You know I'm not fussy."

"Build a refuge?.. What? The two of you on your own are going to knock a house together?" asked Shella.

"I've managed to get hold of manipulator-robots. They'll be useful, I hope."

"Nevertheless one real helper could get the job finished much quicker. No, I don't mean me... You could invite some physicist up there. Surely one person wouldn't undermine Menzies' condition."

"I don't want to risk it."

"You could discuss it with Dr. Mark Nusch for instance..." persevered Shella.

"I'm quite sure that if the unified field theory is destined to be carried through to the end, then one man on his own is going to do it," said Alvar cutting her short. "Anyway it wouldn't be Nusch."

"Why? You yourself said that he's a leading physicist, a Nobel Prize winner."

"That was all in the past."

"He hasn't abandoned physics, has he?"

"Unfortunately."

"What came over him?"

"You see, Nusch was working on the unified field theory, like me. He made certain advances

in that direction. At some physics seminar he said that the results he had obtained robbed God of his last refuge. Well-wishers were found who repeated those remarks to the university's benefactor and Nusch's blasphemy did not appeal to the old chap who started putting the pressure on Nusch at every opportunity. There were plenty of openings too. Nusch seems to have just got tired of the struggle. He caved in."

"What's he doing now?"

"A clever man is always able to occupy himself," said Alvar. "For a start he's teaching, and he's also writing science books for the general public."

"What are they about?"

"Always the same subject. When it comes to physics Mark Nusch has a one-track mind just like me. He brought out a book on the unified field theory recently: *A World Locked in Equations*. It's written quite well but has nothing to do with real science. That's not for me. I'm going to come to grips with the world equation," said Alvar, winding up.

Long afterwards when she looked back Shella could not decide what had been the most important part of that day. The little floating cafe where they had had breakfast, hurrying over it for no special reason? The cine-dome where they had watched an unfunny comedy entitled *Molecular Adventure*? The shooting gallery with live targets? Or the sight of an ordinary road accident in Underground Tier 17?

Worn out from all this on top of their sleepless

night at the banquet Alvar and Shella made their way down into the underground at rush hour. The crush was so bad that they could hardly breathe. By way of consolation Alvar gasped out: "It'll be easier once we're past the centre."

Indeed after twenty minutes of jolting about on the air cushion the crush in the carriage eased. They even managed to find a seat.

Each time that Alvar made a move to disembark, Shella said: "Let's go a bit further."

At last they had to make their way out of the underground. Alvar took her by the hand and Shella felt her heart miss a beat. She loved him, despite all his strange behaviour. She was always ready to forgive this budding genius for his faults time and time again...

"Listen, Alvie... What do we need it for, your world equation?"

"You're not a physicist and you wouldn't understand."

"Even so?"

"The unified field theory is the key to man's limitless power over the universe, over matter and its mutations. Over space and time. Will that do?"

In silence they walked past a rapier block that stuck up into the air like some fishbone.

"And if I'm asked where you are?" said Shella breaking the awkward silence.

"You don't know."

"What d'you mean?" Shella asked in bewilderment. "Everyone knows that you and I..."

“Gone, drowned, missing without trace,” Alvar reeled off in an irritated voice. “Take your pick.”

“Will you be able to take everything you need with you in one go?” asked Shella changing the subject.

“I don’t have much luggage. What I need most of all in the Rockies is ideas. New ideas, a whole flood of them. I hope they’ll appear,” said Alvar putting the palm of his hand to his forehead. “Up there in the mountains there’ll be no one to stop me thinking.”

They stood for a long time next to the moving pavement. The grey conveyor carried men and women along the street: “Like so many wood chippings...” thought Shella to herself.

“Let’s say goodbye,” said Alvar.

“Are you in a hurry?”

“I ought to look through my luggage again. Isav will be worrying as I haven’t shown up for so long.”

“How do you know?”

“But you know that we can read each other’s thoughts,” laughed Alvar ruefully.

“There’s no more to be said then, I wish you success.”

“Thank you, Shella...”

“Yes?”

“Will you wait for me?”

“I’ll be waiting all my life. Only I don’t know what for...” Shella announced in pensive tones.

They kissed.

“I’ll come back, I’ll find you, Shella,” Alvar

managed to call back to her before he was carried round the corner out of sight.

The stream of people passing by on the conveyor gradually thinned out. Shella chose an empty patch and, after hesitating for a moment, stepped on to the moving pavement.

CHAPTER II

THE CROW'S NEST

Dawn breaks early in the mountains. The ancients used to observe: "Mountains are nearer the sun." The sun had not yet emerged completely from behind the jagged ridge, but relentless beams of light were already streaming onto the timeless peaks now bathed in pink.

Yet the night did not hurry to abandon a certain ravine between three sombre slopes. A grey gloom seemed settled there, and from the uneven stony floor of the ravine the stars were still clearly visible.

The natural camouflage provided by the folds in the rock made it almost impossible to see the ravine from the side. It could only be made out by someone flying directly overhead. Yet all the ordinary passenger lines passed to one side of this part of the Rockies: this was something that Alvar had also checked out. It was only the eagles who cut across this patch of blue as they soared around in search of prey on the rocks below.

At the foot of one of the precipices forming the ravine was a low dome-shaped edifice, most incongruous in that particular setting. A skylight in the dome opened and keeping his head low, Alvar clambered out. Shivering in the morning cold he went over to a nearby tree, made the next notch on its trunk with a knife and then slowly made his way along

the path which any onlooker could only have imagined rather than actually pick out. In fifteen years Alvar had got to know it so well that he could have found his way in total darkness. There were dark heather bushes along both sides of the path covered now with icy dew. Alvar tried not to touch them.

The inhabitant of this self-inflicted prison moved down slowly into the narrow rift, down to the spring. Some diffused light penetrated that far from the narrow ravine. Alvar leant down over the water. A thin bearded face stared back at him. He pulled his curly reddish beard to one side and lowered his face to the water. After drinking his fill, Alvar rose and stretched to his full height. The sky was growing lighter and the stars fading one by one. That day he had been sitting up late over his computations. The final equation had escaped him. At times it had seemed almost within his grasp, and then it had eluded him and seemed quite inaccessible, just like the summits of the mountains now splashed with sunshine. There was an illusion that they were only at arm's length but the ornithopter's wings would spin on and on and the peaks would seem just as far away...

Several times Alvar had had the feeling that the task he had set himself was solved. But each time he would discover a mistake in his computations.

Alvar had got into the habit of referring to his domain as the Crow's Nest. His dwelling had been put up for him with the help of manipulator-robots obtained unofficially from the Lunar Rhapsody Company. They had

been intended for excavation work in the rigorous conditions to be found on Mars, to which a geological expedition was soon to set out.

Abor Isav had brought to the Crow's Nest everything that his master required for his work: notably a sophisticated computer configuration including a powerful CPU and an immense data bank held on various magnetic storage media, then, last but by no means least, a datatron... It had been no easy matter to get hold of this advanced equipment, but for Abor Giltsoni's instructions were law, even if it meant risking his life to carry them out. Alvar also had a small reactor and a Wilson cloud chamber that enabled him to observe and compare with his predictions the strange paths of elementary particles—those “building bricks” of the universe, the components of the world, whose underlying equations Alvar still had to unravel... Once everything had been set up Alvar got down to work and sent Abor back to the city. His way of life in this one-man, hermetically sealed dome was Spartan.

While Alvar had been settling into his new home, there had been no time to feel homesick. There had been no time for looking back during the first months of his work either, when he had been working relentlessly. On rare occasions Abor would appear, bringing new physics journals, food supplies or new apparatus with him before obediently disappearing again. Alvar would talk to his assistant extremely seldom and with the minimum number of words.

After six months Giltsoni's mood had changed

considerably. Almost without him noticing it, a sense of isolation started to gnaw at him. It gradually invaded his mind like water seeping through into the hold of a leaking vessel—quietly and almost imperceptibly. The work did not seem to be going well and Alvar decided to do without Abor's services, lest contact with his half-robot friend went against the condition set by Menzies.

Then suddenly while he was at work on the equation Alvar felt that he had forgotten how to speak. So he started talking to himself. For whole days on end he would mutter away to himself as he filled pages of paper with his jottings, looked at photographs taken with the Wilson cloud chamber or test-ran his latest calculations; he would hold forth in endless tirades, sing Shella's favourite songs to himself, or salvage his memories of the past like a miser opening his coffers and rummaging through his treasures.

When had the thought of the world equation eaten into his very soul? While still a first-year student at the university Alvar had encountered Einstein's unfinished work on the subject of the unified field theory. The young student's imagination was fired, marvelling at the ability of the human mind to erect such faultless creations based purely on the abstract foundations provided by theoretical postulates.

But to use the word creation or edifice in the plural here would be out of place. There was only one, a single one. There could be no others. Einstein had undertaken the bold venture of capturing the whole universe within

a single series of equations. It was then while still in his first year that Alvar vowed to himself that he would complete the task on which Einstein had embarked. He did not say a word to anyone of his plan, knowing he would have been ridiculed at the mere mention of it.

For many years a number of eminent physicists had been working on the unified field theory. Yet not one line of research had proved successful. The university authorities had taken a disapproving view of Alvar Giltsoni and his work after what happened during the third year of his university course. He had been careless enough to sour relations with the benefactor of the university like Mark Nusch had done before him. However unlike his supervisor he had voiced his criticism in public.

This had occurred during a special celebration, when the President had arrived in person on the occasion of the university's centenary. When the benefactor had made a vote of thanks to the highly esteemed devotees of science in his shaky old man's voice, referring to their decision at last to abandon fruitless attempts to discover the undiscoverable and instead to concentrate their efforts on the nation's more immediate requirements (which he then proceeded to list in tedious still squeakier tones), a swarthy youth in the middle of the packed hall rose to his feet and proclaimed in a loud impetuous voice:

"Preaching should be left to the priests. There is no such thing as the unattainable, only the unattained... Physicists are bound

in the end to construct a unified picture of the universe.”

“Do you know who tried to solve that task?” interrupted the Chancellor.

“Yes. But at that time the general level of scientific knowledge was too low. Too little information about elementary particles had been collected then,” replied Giltsoni.

“Perhaps it is you who has taken it upon himself to solve the problem, young Sir?” inquired the benefactor, raising his voice in ironic irritation.

Giltsoni shrugged his shoulders and sat down again amidst a hum of excited voices.

It was not only the benefactor who had been offended by the short inflamed speech made by Giltsoni. The university senior staff had been still more concerned since they understood the implications of Giltsoni’s words all too well.

The crux of the matter lay in the fact that the unified field theory if it were ever to be rendered complete would oust God from the universe once and for all: no corner would be left for him, not even the most humble of corners. This was why the powers-that-be in the university looked askance both at that theory and also at those who busied themselves with it.

The benefactor turned crimson with fury and bending to one side muttered something quickly into the ear of the general sitting next to him, who nodded respectfully several times in succession.

The incident was played down: deliberate

efforts were made to minimise any publicity. Serious threats were made to the wayward student, but in the end he was left alone. It was Mark Nusch, Nobel Prize winner and star scientist of the university who helped Alvar most of all.

Despite various ups and downs Giltsoni was allowed to graduate from the physics faculty. Doctor Nusch showed an interest in Alvar. They spent long hours together in endless discussions as they groped after the truth. They were often seen together in the laboratory wing of the faculty where they used to set up experiments.

It should be pointed out that Alvar Giltsoni did not shine particularly when it came to finals. Later up in the Crow's Nest he came to realise why that had happened: the effect of his surroundings, of other people. The "presence effect" as old Menzies used to term it.

Now nothing could be attributed to that any longer. Nothing was preventing Alvar from achieving the objective which he had taken on himself of his own free will. The task had proved more difficult than it had seemed at first. He had spent fifteen years over it, but at last it seemed as if the end was in sight. Yet the nearer he drew to the ultimate goal, the harder the struggle became and of late he had found himself marking time more and more frequently. Meanwhile Alvar had thought up something new. Perhaps it would be worth attaching an ordinary voice sensor to the terminal block of the datatron. Then he would be able not merely to talk to himself

but to the datatron as well which had a lot of knowledge stored away...

Of course it would be ridiculous to expect that his partner in conversation would be an intelligent one. Alvar had appreciated long since that no machine was intelligent. The days were long since passed when men had hoped that they would succeed in constructing an intelligent machine. Yet a stupid interlocutor was better than none.

Comforted with that thought Alvar set about this new idea with enthusiasm. First he recorded a number of phrases: the speech analyser then arranged in two separate groups the harmonic elements and the overtones, after which it put together a precise mechanical copy of the human voice. Whereas before Giltsoni had received answers to his questions in print-outs, now the answers came back to him in his own voice, although a rather more impassive version of it.

"There's no one to talk things over with here. I'm like Robinson Crusoe," Alvar remarked once, as he screwed up a well-filled piece of paper.

The apparatus made no reply, for the name Crusoe meant nothing to it. The machine had as yet absorbed only a very limited supply of information drawn from the pages of the strange books known as fiction. Its creators had decided that knowledge of that sort was detrimental to machines, and quite definitely of no positive use.

"You'll be my Man Friday then, all right?" came the next question aimed directly at the

datatron. Once again the machine remained silent, since the proposal that it might turn itself into a day of the week was blankly absurd.

Alas, the machine could not explain to Giltsoni that what he needed was a normal environment without which a man cannot breathe or a bird fly.

Apart from the limited space within the dome assembled by the manipulator-robots, Alvar was quite well provided for. He had obtained everything he needed. The microreactor was in good order and the other pieces of apparatus gave him no cause for complaint either. His pattern of day-to-day life was something quite different though...

After Alvar had forbidden Abor Isav to fly to the Crow's Nest he had had to switch to an astronaut diet, to chlorella. The synthesiser was one of the items Abor had brought on his last trip up to the Crow's Nest.

"I thought you'd need this device, Boss," he said unloading the enormous cube-shaped food synthesiser.

Alvar answered with a nod. He had long since ceased to pay any attention to the fact that Abor persisted in calling him "boss". When he made a break in his work schedule for breakfast, lunch or supper, Alvar would look with repulsion at the small precisely measured out food pellets which the synthesiser would spit neatly onto its tray.

Whenever in the course of scientific experiments a new elementary particle was discovered Alvar tried to incorporate it into the equation. It was only on rare occasions that he turned to

mechanical devices in order to check out some complex formula. Indeed his teacher Mark Nusch had always stressed that the tools of the theoretical physicist should be pencil and paper.

Giltsoni learnt from Abor that new particles had been discovered: he had read aloud the content of articles from scientific journals to him over the radio. Days followed one after another as if cast from the same mould. Even at the time of the very hottest weather it was cool in the ravine, and on damp days or in the cold Alvar would turn up the thermostat.

There was nothing up there in the mountains that might have prevented Giltsoni's genius from unfolding to its full extent. Indeed on Alvar's instructions the manipulators had even installed a magnetic shield-barrier, so that not even a stray bird could penetrate into Alvar's world. Yet that invisible barrier was designed not merely to keep out the birds. Alvar had taken far too much to heart Menzies' warnings to leave it at that. The magnetic barrier was to make absolutely certain that the mind of this young genius should achieve total isolation. As Giltsoni himself saw it, it should deflect any chance alpha rays, if, even in a weakened form, they should make their way as far as the Crow's Nest.

CHAPTER III

THE WORLD EQUATION

Artificial light gleamed out from the lighting panels of the only room in Alvar's dome. He had worked out that it must be evening, but was reluctant to make the effort to confirm it. He had no desire to go outside. He felt off colour today somehow. Cold shivers kept shaking him. Alvar straightened the jacket that he had thrown carelessly on to the back of his chair and then pulled it round his shoulders. He thought it could be malaria, but wondered where he could possibly have caught it. He, like everyone else, had been given his polyvaccine, when he had still been at boarding school. But perhaps a mosquito had managed to penetrate the magnetic barrier?

This far from profound question was enough to distract Alvar and make him go off at a tangent. He gave a tug at his beard, laid his pencil to one side and started wondering. He was looking down at the mathematical symbols on his paper but his thoughts took him much further afield.

Today was an anniversary. On that very day fifteen years ago he had flown up to this mountain hide-out. A ramshackle ornithopter that had seen a good number of repairs had brought him and Abor up into the Rocky Mountains, to the spot which Alvar had selected in advance, after a long and careful study of the stereo-map. He had brought little luggage

but a large store of hope with him.

What had he accomplished during those years of hard labour? At first glance it seemed a good deal. He had succeeded in establishing inter-relationships between at least thirty elementary particles ranging from positrons to hyperons. He had summarised the results of thousands of experiments outlined in thousands of articles. No electronic brain could have possibly coped with a task of that magnitude.

The trouble was that the data assembled was not fully consistent and on occasions there were even direct contradictions. How could he get to the bottom of that? Why did it happen? Had some experiments not been set up properly? Had measurements been incorrect? Perhaps an article had been written by a scientist who did not check out all his findings conscientiously enough, twisting the facts so as to win at least passing fame?

It was almost impossible to find a way out of that jungle. Alvar checked, cross-checked, and hunted down errors before he was able to make each tiny step forward. Any electronic brain that had been entrusted with such a task would have burnt itself out on the first logical contradiction.

Giltsoni withstood the test: after all, man is made of sterner stuff than machines and has flexible reasoning at his fingertips. He managed to demonstrate that all thirty elementary particles represent none other than one and the same subparticle, only in a variety of energy states, in the same way that an

accomplished actor could transform himself into dozens of different characters with the help of make-up.

Fellow-physicists would no doubt have been thrilled by the hard-won discovery. Yet Alvar did not rest upon his laurels: there was still a long way to go to reach the unified field theory, or the world equation...

There were just a few "strange" particles that seemed loathe to fit into Alvar's scheme of things. A mere trifle perhaps? Giltsoni knew all too well the significance of such "trifles". One tiny experimental finding, that might appear merely coincidental could bring down the whole streamlined edifice of a potential new theory.

He got up from the table and took a few steps in an effort to get warm. The food machine whirred quietly. As he walked past it Alvar tried not to look in that direction. There is a limit to any man's patience. Sometimes he felt an almost uncontrollable urge to seize a hammer and smash to smithereens the hated "belly" of the ellipsoid, in which the wretched chlorella was being relentlessly produced.

At last Alvar looked at his watch and saw that it was nearly midnight. He walked over to the table and absent-mindedly leafed through a few pages that lay there and sighed: "I can't see an end to it."

"An end to what, Giltsoni?" came a sudden question in his own voice. His own voice? At first Alvar lost his bearings and did not realise that it was the recorded voice he had fed into the datatron.

"Why did you start up without the signal?" asked Alvar sternly. Hitherto the datatron had only answered his questions.

"Because you said something absurd..."

"Belt up," interrupted Alvar in an irritated tone and the datatron obediently stopped.

The datatron had obviously changed course: after storing up more and more information about the person with whom it interacted over the years it had started to acquire new characteristics.

Alvar lay down and called: "Datatron!"

"Yes!" replied the obliging piece of apparatus.

"Let's think up a name for you."

"It's people that have names."

"Not only people. Any ship or rocket-ship can have a name too," remarked Alvar.

Alvar put his hands behind his head and suggested: "Let's call you ... Charlie for instance. I had a friend once with that name. O. K.?"

"Niels would be better."

"Why Niels?"

"That was the name of the physicist who first came up with a model of the atom which played..."

"In honour of Niels Bohr then," said Alvar anticipating what was coming next. "Have it your own way. Niels it shall be then."

"Tell me, Giltsoni, what is the real essence of the unified field theory," asked the datatron all of a sudden, without warning.

"If I could answer that question there would be nothing left, Niels, for you and me to do," replied Alvar with a smile.

As he chatted to the datatron Alvar felt a little better. He would get up now, make some coffee.

A few days previously he had succeeded in solving a problem which marked an important link in the overall theory. Although he still could not see the end, he did feel he had earned the right to a short rest.

A chat to Niels was in order. He was chock-a-block with information, enough to fill ten libraries, and what was more he was acquiring ever more knowledge from day to day with help from Alvar.

Giltsoni realised that at some stage in the accumulation of information by a cybernetic system like Niels, some new logical associations would take shape. The dialectical law concerning the transition from quantity to quality was universal. Yet what would the new features of the system be? It might well emerge that Niels was capable of thought at the level of a seven-year-old child. After all Niels' capacity for logical thought—at the level at which it had already taken shape—had evolved independently without supervision from any human programmers or other logical machines.

“Well,” thought Alvar to himself as he drank up his coffee, “even if Niels' thought processes are primitive and his logic naive, they're at least interesting.”

The next day Alvar found himself marking time in his work yet again. It made him furious and he caught himself with the thought that if it should prove necessary to kill someone to accomplish his mission he would have done

so. The next moment Alvar was filled with horror. Surely his hermit's existence had not robbed him of human feeling to that extent? Perhaps it was the effect of all the blood, sweat and tears that every step cost him?..

On that day there was an abstract figure, a figment of Alvar's feverish imagination, that kept hovering before his mind's eye each time taking on the guise of one or other of his friends from the distant past. Would he have killed or not? "No, no," he kept whispering out loud in a frenzy of despair to the cybers at his side, as if to some personal enemies. Yet there was a voice inside Alvar which kept reminding him that he could not, however hard he might wish it, deceive his inner self.

In the end Alvar sought consolation in the thought that no sacrifice is too great in the interests of the welfare of mankind. After all what did one life mean as against those of thousands of millions who would benefit from the sublime achievement. Then again he had already sacrificed his own life in the cursed Crow's Nest. Indeed he would gladly have hurled himself down a precipice if after that the results he was searching for had remained behind on paper as his memorial.

Alvar often turned his thoughts to Shella, although he had strictly forbidden Abor to find out anything about her. Where was she now, he wondered, what was she doing, who did she spend her time with? She had been twenty when they had separated, which meant that she was thirty-five now. Depressing figures... He took heart also from the thought that

there was not far to go now. He would find the missing links in the chain of the unified field theory and then go back and find her.

But if he didn't prove equal to the supreme task? If he were to find himself overwhelmed by the avalanche of facts involved in the transmutation of matter. What if his life were to have been wasted for nothing? The very thought tortured him. Up to now Alvar had believed in his destiny. His confidence had been boosted by Menzies' convincing conclusions. But what if the old man had been wrong all the time?

Only for a moment did Alvar let himself lose heart, but those thoughts left him in an unpleasant mood, which stopped him from concentrating and later made it hard for him to rest and sleep, and thereby gather new strength.

"Giltsoni, what's an elementary particle?" asked his own voice out of the darkness in the middle of the night.

Alvar clutched at the question put to him by Niels like a drowning man at a straw:

"An elementary particle, Niels, is the step man has reached as he makes his way down into the depths of matter."

"Only a step?"

"Yes."

"And are there other steps after that one leading even further down?" persisted Niels, probing on.

"Without doubt."

"Is that process infinite?"

"Yes, because the depth of matter is inexhaustible."

"If so, don't you think that the work you are doing is futile then and the task you have set yourself is one which cannot be resolved?"

"Niels is not as stupid as one might think," thought Alvar to himself, knowing that those very same doubts were the ones plaguing him.

"If your theory is merely a step on the way down, how can its significance be absolute?"

"It makes no such claim."

"Then what's it all for?"

"You see, Niels... I as a physicist am sure that the laws of nature are in essence simple. The complex way in which man formulates them is the result of the imprecise, deficient nature of man's knowledge. The unified field theory on which I am working should serve as a projector to light up the path to the discovery of essential truth at all levels from the micro-world to the galaxies."

"But the path itself is infinite, isn't it?"

"And what of that?"

"It means that your goal cannot be achieved," concluded Niels with faultless logic.

That remark reminded Alvar of one of Mark Nusch's favourite sayings: "The path leading up to a goal is as important as the goal itself."

Niels, if he could have done so, would probably have shrugged his shoulders...

"After all, physicists are discovering new micro-particles all the time," he went on.

Alvar gave a nervous laugh as he admitted: "I know."

"But won't the avalanche of new particles undermine your unified field theory?"

"No."

“Why don’t you think so?”

“There is bound to be a place for all new, as yet undiscovered particles in my theory,” explained Alvar. “Just as there were empty spaces for undiscovered chemical elements in Mendeleyev’s table. Those substances were still being searched out in flasks and retorts but Mendeleyev was already aware of the properties the undiscovered elements would possess.”

“So your theory must be able to cater for micro-particles that have not yet been discovered?”

“Yes.”

Niels said nothing for a long time, as if pondering over something. Then when Alvar was already falling asleep again the machine announced: “Chemical elements are one thing but elementary particles are another. You won’t be able to complete your task.”

“You can’t see far enough ahead, Niels.”

“Remember what happened to the researchers investigating the micro-world?” objected the machine in its unruffled tones.

Niels’ voice whirred on gently, painstakingly relaying the information stored up in its memory units. At three o’clock in the morning it had got as far as the as yet unexplained nature of nuclear forces closely linked with the nature of light radiation, even referring on the way to the remark that has gone down in faculty history, a remark that he had learnt after one of his earlier conversations with Alvar: “Light is the real blind spot in physics!”

“Why worry about light!” Niels said carrying

his train of thought one stage further. "Even in classical physics, now seen as a neatly completed step on the ladder, there are foggy patches that still need clearing up. You do not need to look far. In straightforward Newtonian mechanics no satisfactory definition of the concept *force* has yet been provided... Force is the weak spot in mechanics," Niels concluded.

Alvar came back with an unconvincing objection to Niels' harangue.

Well into the small hours the machine suddenly pronounced: "It's clear now that you've taken on something that is more than you can cope with."

"Belt up!" exploded Giltsoni but Niels went on quite unruffled:

"There is no solution for your problem. It's not the limitations of the human mind you are up against."

"Well, what then?"

"The very nature of things. Infinity can't be measured in miles and inches."

Alvar sprang up from where he was sitting and switched the machine off. If only he could have switched off his own doubts though! Were it only possible to probe the chaos of the micro-world, where so-called common sense developed by man over thousands of years of his evolution is rendered ridiculous and futile! Indeed how can incessant explosions and catastrophes serve as the foundation of our outwardly so streamlined world? Each moment, within each infinitely tiny cell of space, myriads of particles are born and perish

without trace in imperceptibly rapid eruptions. How can we, after that, put together a picture of a logically ordered world inhabited by man? Perhaps such a task is indeed insoluble? Perhaps Niels was right?

Alvar clutched his head in despair. It would not take much more to make him lose his mind. He had to see another human being and quickly! His wandering gaze alighted on a tin-opener. When he could stand chlorella no longer, he used to switch to cans although those too did not appeal. Unthinkingly he turned the metal tool over and over in his hand. He touched the blade with his finger, but it was blunt. It would be no good to take his life with that. It needed sharpening. Alvar had long since forgotten that only minutes earlier he had wanted to see one of his fellow-men.

Alvar got up and shuffled out of the dome. Low clouds were drifting across the sky leaving smoky wisps behind on the slopes. A gust of wind was pulling at the treetops. He walked up to the tree and using the tin-opener made his next notch on its bark. There was hardly an untouched space on the trunk left now. Then he leant his fevered brow against the tree.

Should he turn his back on it all and return? It would mean having real faces to look at, the chance to hear laughter and other people's conversation, not just his own voice reproduced by a machine. Should he accept defeat and become just another physicist no different from thousands and thousands of others? Should he go back to small-scale experiments

and not look further afield than his very own nose? Should he spend the rest of his life chasing after some micro-particle perhaps without ever finding it? No, anything but that!

Alvar knelt down and started sharpening the tin-opener blade on the curved surface of a granite boulder polished smooth by time and storms.

It was silly to put an end to his life in this way of course. But what was he to do? There wasn't really any other way out. He would die, his flesh would rot and his clothing perish. Who knows, but perhaps, years later, a lonely traveller might wander quite by chance into that remote ravine. By then the magnetic shield surrounding the Crow's Nest would have lost its strength. A mountaineer or geologist lagging behind his comrades might come across the strange dome in the ravine, containing rusted apparatus, the tree peppered with dark notches and next to it a skeleton scorched white in the mountain sun. The traveller might wonder and speculate about what he had found but would never discover the tragedy that had been played out in the forgotten ravine.

Perhaps the human race would never have found itself so near to breaking the most precious secret of nature as in those years when he, Alvar Giltsoni, in his voluntary exile had been working away with fanatical dedication in his Crow's Nest in an attempt to fuse together thousands and thousands of conflicting pieces of data.

Yet no one had said that Alvar Giltsoni and he alone was capable of drawing up the

world equation. Perhaps someone else might appear ready to take on his shoulders the burden of the unified field theory? Alarmed by the thought Alvar froze in horror as he knelt by the boulder. Now, when he was at the brink of defeat it might suddenly emerge that there was indeed a happy man who could accomplish his mission. He would be able to achieve what Alvar Giltsoni had failed to achieve. Perhaps at the price of far less effort?

How unjust! Yet was it not ridiculous to even mention justice in this world? No one would be likely to remember the unsuccessful physicist Alvar Giltsoni. But no, damn it! Failure was not what he was cut out for. Alvar was not going to leave the arena without so much as a whimper. The curtain had not come down yet, work was still in progress. He still had a faint chance left for inspiration—perhaps as he checked through his own computations once more, down to the last detail. Maybe a mistake had crept in somewhere that would render meaningless all Alvar's intricate structures?

He shrugged dejectedly, threw down the tin-opener and marched resolutely over to the dome which beckoned to him with its lighted windows.

To start with Alvar took a quick snack. Even the sickeningly monotonous chlorella cubes seemed more palatable than usual on this occasion. Then he sat down at his work-table, reached for the datatron terminal and began to check through his calculations.

A week later Giltsoni realised that there was

no hope left. He had not found errors anywhere in his calculations, or any obvious errors at least. But at the same time any hypothesis, or proposition on which his theory was based might also prove to be erroneous. No, there was no way out of this tangle of hypotheses, which under certain conditions tallied and in others contradicted one another.

It was all over. That week had robbed him of his last hope. The first grey hairs had appeared in his beard. After all, he had surely sacrificed everything that the ordinary mortal holds most dear to the Idea—his youth, career and, last but not least, personal happiness.

To think that someone else might reap the prize en passant that Giltsoni had been ready to give up his very life for! He, Alvar Giltsoni, had put too much of himself into the struggle for the unified field theory. The glory of discovering the world equation had to belong to him and no one else on earth!

...He thought back to a conversation he had years before with Dr. Nusch that had marked the beginning of their friendship. They had just been carrying out a complicated experiment on photon diffraction. It had been close and damp in the laboratory even though the air conditioning had been switched on. Mark Nusch had unfastened his checked shirt at the neck and sat down on the corner of the table with a deep sigh.

“What are you thinking about, Alvar?” he had asked his research assistant.

Giltsoni had looked up from the apparatus and with a sheepish smile replied: “The unified field theory.”

He had expected harsh criticism for letting his thoughts wander during an important experiment, but all of a sudden Nusch had said: "I was thinking about it as well. D'you know, lad, who's up to taking on a challenge like that?"

"Who?" asked Alvar eagerly.

"Someone who doesn't take anything on trust, who questions all scientific dogmas that other physicists see as incontestable. Albert Einstein was just such a man."

Giltsoni could not help feeling drawn to this man, who was giving voice to his innermost thoughts. He replied by saying: "Only a genius can get the right angle on things."

"Precisely, colleague," agreed Nusch. He in his turn could not help liking this young man with the feverish glint in his eyes.

"A genius marches ahead of the rest, blazes a new trail for fellow-scientists. His mistakes are dangerous, for they hold back the advance of physics, yet his victories are beyond price!.." Giltsoni went on in impassioned tones. He was in a hurry to tell Nusch everything he had been brooding over during many a sleepless night, during boring lectures or in physics seminars.

They continued the conversation over a meal in the canteen. Giltsoni maintained: "In order to attain his goal a genius can use any means."

"Not *any*, Alvar," Nusch remarked with a shake of his head as he helped himself to salt.

"Any," insisted Alvar. "The first thing that has to be done is to turn your back on *yourself*."

Nusch gave a sigh and said: "Not everyone is capable of that."

"Can a physicist really achieve anything meaningful if he wastes his energies over trifles, on teaching mediocrities and writing futile books?..."

"Science for the masses is also important," persevered Nusch but with little conviction, as if he was trying to persuade himself of this "truth", rather than his friend.

Alvar was getting worked up by this time: "You don't seem to know what you yourself are capable of, Doctor Nusch!"

"Perhaps. I'm worried that the Big X's network knows far more about me than I do myself," admitted Nusch sadly. "But you, Alvar, you're someone I *do* believe in. You've two undeniable advantages over me—youth and ambition. You're capable of a great deal despite your strange outbursts."

Alvar believed in himself too. He had faith in himself come what may. But now after fifteen years in the Crow's Nest he had lost his sense of vocation.

His overcharged imagination kept on presenting him with a picture of some low-grade bureaucrat poring over a ledger—with as yet no notion of his destiny. He would sweat away for another year or two and then suddenly he would accomplish with ease what Giltsoni had been struggling unsuccessfully to achieve all his life. Exhausted on account of lack of sleep Alvar leant back against the tree with notches in its trunk.

Without noticing that he was talking to him-

self he muttered: "I would be ready to kill that pen-pusher, but how to find him, the lucky devil?"

Oh, if only he could have found him! But in that case there would have been no need to kill him, whoever he might be—clerk, cook or dentist. He could go about things differently—

The end justifies the means!

Alvar took a new look at the Crow's Nest. Here in this wild corner he was unchallenged dictator. If he could only get the lucky devil out here ... then talk to him, finding out his ideas on the unified field theory would not be difficult. Just in case, his assistant Abor Isav would be to hand, strong and obedient as ever.

If the man brought up to the Crow's Nest had not yet started working on the world equation then things would be even simpler. Giltsoni would simply start working with him, spurring him on to ever new pastures without him noticing. The necessary books, reference manuals, micro-film copies of articles taken from scientific journals were all to hand just for the asking.

He would milk the stranger every day, just like a conscientious, patient farmer milking his goat. Then when the equation had been worked out... But there was no need to worry about that yet... A genius is not subject to any sanctions. He, Alvar Giltsoni, stood above the crowd, its norms and laws, its banal morality. Yet what outward signs could he go by to recognise the most talented among contempo-

rary physicists? Particularly since he would only become a physicist later on and for the moment might be engaged in other work? Clearly it was necessary to have access to as much information as possible on the individual concerned to be able to make a reliable judgement about a man and his future. Indeed he needed to know more or less everything about his future co-worker. But how could he know everything about everybody?

Wait a moment though, what about Big X?

Alvar, like everyone else, knew that in the offices of the administrative body in charge of maintaining public order, there was a dossier on every inhabitant of the republic, containing a record of all details right through from the cradle to the grave. Such neat little micro-cells for everybody which together made up a giant sort of honeycomb. In each little cell or sector there was everything one needed to know.

Yes, a chat with Big X—the giant electronic data bank—would not be a bad idea. Let him run through those cells of his data store and predict which of the country's inhabitants was the next candidate for genius.

But how could he get at Big X? Flying to the capital and trying to penetrate the building would be folly. Even if Giltsoni could accomplish the impossible and get at the micro-cells—what then? How would he decode them? After all singling out genius, the task that Alvar had in mind, was far from run-of-the-mill. Keeping track of seditious elements was quite a different matter. He knew there was

a special device known as the "all-seeing eye" from which nothing could be hidden, no chance phrase, or careless word critical of the President.

Even if he could reach Big X Alvar doubted whether he would be able, on his own, to analyse the endless supply of information contained in the cells in order to pick out the physicist with the greatest potential for work of genius at the present time. How much harder then to single out the future's foremost physicist! After all there were millions upon millions of cells contained in Big X's data bank.

"It is probably not much easier than cracking the world equation," thought Alvar to himself, kicking the tree in irritation.

The "genius hunt" which Alvar was now contemplating could probably be undertaken by a strategic-decision machine. It would analyse a mass of possible methods and then make a logical choice. It would not be difficult to get hold of one of those machines. Perhaps he should take one of those along to Big X?

"But no," Alvar brought his hand to his forehead as he realised that there was no need to move one of those machines about. The "genius hunt" could be carried out by Big X himself. All that was needed was to put the problem to him, in other words to programme him correctly, to get Big X to do the work for him.

Let him run through all the sectors of his memory. The task could be formulated as

follows... Alvar walked down the path leading to the spring proclaiming in slow deliberate tones: "To select from all those alive today the person who has (or will, given time) come nearest to a perfect mastery of physics."

But could an outsider get through to Big X? The electronic brain, just like his own Crow's Nest, was sure to be shielded from invaders by strong defences, that would stop anyone trying to get in if they did not know the code which would switch off the protected zone. There would be little chance of getting hold of that code. Alvar was convinced of that. Big X's defence barriers were programmed in such a way as to make allowances for the fact that the alpha waves of each person's brain are individualised. No two alpha waves are alike, just as no two people are alike.

In the security centre of the building housing Big X there was a catalogue of alpha waves belonging to all staff servicing the giant machine. Each member of staff had of course his own particular alpha pattern that served as a pass which could neither be lost nor duplicated.

Alvar looked over at the manipulators which had been used to assemble his dome. Perhaps the answer would be to send down to Big X a cyber-manipulator, programmed in advance to make contact with the electronic brain. The discharges coming from the magnetic barrier would not burn it. However the security service had of course taken into account such

possibilities and supplied Big X with a logical labyrinth as well, which was more than any cyber-manipulator could cope with.

A man on the other hand would have been able to cope with the maze, but could not have penetrated the electromagnetic barrier. So it was vicious circle: who could combine properties of both machine and man? No such hybrid existed.

Oh yes, it did—Abor Isav! He would surely fit the bill! He would be able to solve the logical problems posed by the labyrinth, although they changed from time to time, problems that would bring any ordinary machine to a standstill.

Here was still further confirmation of Giltsoni's genius! He had clearly shown great foresight when he had assumed during his work on Abor's seemingly hopeless case, that one day the semi-robot might prove useful to him.

All that Alvar had achieved so far was "peanuts". A genius needed to be able to make fresh starts, just strike a pen through what had gone before. Now he would glean real benefit from the foresight which had led him then, in Menzies' clinic, unbeknown to others to make certain modifications in the electronic brain that was to replace Abor's own. Now Abor Isav came somewhere between robot and man. This missing link in the chain, he, Avar Giltsoni, could now use to carry out his plan.

Abor could of course perish as he drew near to Big X but, after all, scientific progress

could not be achieved without any sacrifices being made! How many people had perished before man had finally learnt to harness thermonuclear reactions! Not to mention the conquest of space!

Yet who could mention in the same breath those all important but nevertheless partial victories and the world equation? Would the sacrifice of a mere half-man really look significant where the unified field theory was at stake, when it promised men untold prosperity and well-being?

Giltsoni rushed off to find the transmitter which was lying under the table and by now covered in dust. He could not even remember when he had last contacted Abor. He could have used the ordinary biolink to contact him—he always kept the small capsule in his pocket—but the transmitter was more reliable.

He wiped the screen with a rag, and as he did so decided that there was no point in him leaving the Crow's Nest: from here he would supervise the operation he had devised. There was not a moment to be lost, too much time had slipped past him already.

Yet as he turned the knob, Alvar thought to himself that more haste could mean less speed. He needed to work out a plan of action, albeit a preliminary one. He put down the transmitter then and pulled over towards him a clean piece of paper. He pored over the plan for a long time. Some points jotted down in the beginning he struck off and added others. Then he read the whole thing through and was satisfied at last, now that all the pieces

in the jigsaw appeared logical. Now he could get in touch with Abor.

"Our main trump cards are the boldness and surprise element in our attack," muttered Giltsoni as he finished tuning in.

* * *

A haze slowly emerged in the dull depths of the mirror. Gradually the haze acquired Abor's features. It was the afternoon now and Abor had been resting. Without saying anything Alvar studied Abor's expressionless face. The unblinking gaze, awaiting commands, was directed straight at Abor's master. And to think this was the one to carry out the vital mission! What could be done though, when Abor Isav and none other could bring nearer the goal that Alvar Giltsoni had set himself.

"Listen carefully, Abor," Giltsoni began, looking round for no apparent reason.

After detailing his instructions, which did not arouse the slightest sign of surprise in Abor, Alvar switched off the transmitter. Now that the wheels had been set in motion, Abor was making ready to carry out the first part of the plan. It would take him about forty minutes to make his way to the tailor's.

How should Alvar kill time now? Perhaps it would be as well to turn his mind to how he should bring Big X's chosen man to his senses, if the latter should contemplate being awkward.

Alvar's gaze lighted on an opened packet of cigarettes that Abor had forgotten when he last visited the Crow's Nest. Abor smoked such strong cigarettes, that they almost took Alvar's breath away. He used to add a narcotic to the tobacco, assuring Alvar that only that infernal mixture could dull the pain he felt at the back of his neck from time to time. Giltsoni knew only too well why Abor suffered from those pains and so used to connive at Abor's weakness. He turned the packet over in his hands. In the drawer of his table Alvar had a small quantity of a very strong narcotic—tseon. He used to keep some just in case Abor should have an attack while up at the Crow's Nest.

He could of course just fill the cigarettes with tseon and then seal the packet up again. That would provide a useful weapon if he should ever have to calm someone down or rob them of their willpower. The cigarettes had filters which was good for the attacking side. In addition smoke from cigarettes with tseon dispersed particularly quickly, which made it safe for anyone who might take that smoke into his mouth without inhaling it and blow it out immediately afterwards. The other party, suspecting nothing, would breathe the smoke in and then...

Giltsoni put his watch down on the table in front of him and then set to work on the cigarettes after taking the tseon out of his drawer. When he had added some to all the cigarettes he carefully sealed up the packet again and then looked at the hand of his watch,

which showed that 35 minutes had passed.

“It would be interesting to test the cigarettes out on someone...” thought Alvar to himself.

He turned the transmitter on again and began to follow Abor Isav’s movements as he went about his work.

CHAPTER IV

BIG X MAKES HIS CHOICE

During his long years up in the mountains Alvar had not shown much interest in the life of the world outside, which he had left of his own free will. He had paid little heed to what was happening in it, what it was like nowadays, what people were wearing or how they were spending their free time. There had been quite enough worries and disappointments in the Crow's Nest to keep him busy.

Now as he watched the screen observing Abor's measured progress along the street, Giltsoni kept marvelling at the changes which had taken place in city life during that interval. The pace of life seemed still more hectic, if that were possible. A variety of details rivetted Alvar's attention.

He did not even bother to look twice at the fashions. He had never shown particular interest in those, and was left quite cold by the strident colours of the women's clothes, their hats trimmed with signs of the zodiac, the double rings they wore in their ears or the luminous lipstick applied in triangles round their mouths.

Some of the shop-signs that Abor strode past left Alvar guessing. He could not imagine for example what a "Salon for Individual Spraying" might be. On the door was a picture of a nude nymph waist-deep in foamy waves like some latter-day Aphrodite. Abor slowed down as he went past the salon and in the end

stopped to have a look. Giltsoni decided that Abor must have been stopping to admire the nymph, for he knew that his assistant had a weakness for the fair sex. Abor would have to be punished for deliberately delaying things. Alvar put his hand into his pocket where he kept his biotransmitter, but at that moment Abor pushed open the door and went into the salon.

With a strange smile Abor made a request that was still stranger: to be fitted out in the sky-blue uniform worn by programmers from Big X's support staff. That uniform in itself was no secret, for it could be seen almost every day on the television screen. In deference to the customer's wishes two girls showed him into an unoccupied cubicle, after first setting the spray controls.

When Abor came out of the cubicle two minutes later, his athletic figure was enveloped in close-fitting blue plastic. On seeing this Giltsoni sent out a thought-command to Abor, who changed back into his old clothes while the uniform was tied up in a tidy parcel. Once he had paid and left at the same sleepwalker's gait as before, a lively discussion started up amongst the staff of the salon. Giltsoni listened to them with interest. From the comments made he was able to imagine what innovations had appeared during his fifteen-year absence.

"When that fellow came in, I thought it was a robot, I swear!" chirped the young lady responsible for colours of the spray-on clothes.

"So they must have learnt to make robots," Alvar said to himself.

"Robots are forbidden to wear the spray-on clothes," said the cashier.

"I was just on the point of ringing the police," went on the colour-girl, "when all of a sudden he looked at me..."

"How?"

"In such an intelligent, probing way..."

"Robots can look at you like that too," remarked another attendant.

"No, robots can't look at you like *he* did," objected the first one.

"You've been had, my lass," commented a red-haired packer, winking at the others. "That was a typical robot."

"And an extra special one at that," chipped in the girl sitting next to him, entering into the spirit of things. "No mere man could have shoulders as broad as that, now could he?"

"And that jaw-line! Brrr!" added the packer.

It was the owner of the salon who had the final word. Slamming his hand down on the reception desk he insisted: "Of course it was a man we were serving. D'you think we'd go breaking the law?"

Abor longed more than anything for the dull but insistent pain at the back of his head to stop, for it could drive him to quite unpredictable behaviour. What on earth had made him go in and buy that expensive blue gear? Where must he go next?

As he walked along, wracked with pain, the faces of the people roundabout seemed hazy and

unreal. Thoughts broke off before they had hardly taken shape.

Far away up in the Rocky Mountains Alvar Giltsoni pressed the biotransmitter in his pocket and sent another command-signal to Abor, who set off quickly almost at a run.

“That’s better, sonny,” muttered Alvar with his eyes glued to the screen. “Now, straight to Big X and may God help you when you get there! ”

Obedient to the thought-command sent to him from far away, Abor joined the crowd jostling down into the underground. The train was swaying slightly as it went along and the picture on the screen deteriorated.

Abor sat down clutching the parcel containing the blue outfit to himself. Every now and then he pressed his fingers gently to the back of his head.

“Grin and bear it, my lad. I had no choice...” whispered Alvar.

The train shot up like a bullet to ground level, and then, once past the bridge, it made its way in the direction of the suburbs.

Any other time Giltsoni would have been scanning the town’s new skyline with interest, avidly taking in the new buildings that had been put up during his absence. But now there was no time to admire the impressive city-scape. He dared not lose sight of Abor even for a moment.

“It’s time to dress,” thought Alvar still holding on to the transmitter. At that, despite the hundreds of miles that separated them, Abor started, suddenly realising that what he needed

to do next was put on the plastic suit. He jumped up from his seat and, still somewhat shaky on his feet, made his way down to the end of the coach. Two minutes later he came out of the toilet indistinguishable from any other blue-clad programmer from Big X's staff.

When the train stopped and Abor stepped hesitantly on to the dusty and deserted platform, Giltsoni concentrated with all his might on reaching his friend with the all-important message and repeated the details of the mission. It would have been dangerous to keep Abor "on the lead" any more using the biolink: he had now to behave quite naturally, not standing out in any way from those around him.

Abor joined the long chain of employees making its way at a leisurely speed towards the turnstile. Everyone in the queue was dressed identically in the same clothes as Abor. In the distance loomed the colossal wall that surrounded the building housing Big X.

Giltsoni switched off the transmitter. The hours of waiting ticked slowly by and Alvar felt drained. He went down to the spring, threw some stones into a chasm and then went back to have a drink of coffee. In a preoccupied way he turned over and over in his hands the packet of cigarettes that he had prepared for future use the evening before.

It was time!

Giltsoni switched into the screen again. Once more a line of employees was snaking its way through the turnstile, but this time on their way out. They were all looking down at the

ground and not talking to each other.

There was Abor! His face showed the strain of complete exhaustion and his eyes were half shut. He knew of course that his life was at stake, but was unable to go against his master's will.

Alvar could hardly wait to ask whom Big X had selected, but he held himself in check: a surprise jolt might make Abor lose his precarious balance and that would have made all the plans go up in smoke.

Abor got out of the train and wandered about the streets for a long time. He was coming round again, as if waking from a long dream. Alvar did not touch the biotransmitter, he just let events take their natural course.

Abor walked out on to the middle of the bridge and stopped. The stream of traffic was roaring by, people were hurrying past him as they went about their business, stepping from one moving pavement to another, but he was oblivious of it all. He leant on the cast-iron rim of the parapet and stared down into the murky water with unseeing eyes.

"Too much independence is not a good thing," thought Alvar, by now worried. "The last thing he must do is throw himself into the river." He concentrated on the next instruction and gave the lightest of touches to the biotransmitter. Abor's face twisted with pain. Without looking round, he came down from the bridge, walked through a number of streets and then stopped in a run-down square walled in by enormous buildings. There was no one else there and he went up to a seat and almost fell onto it

as if someone had hit him in the back of the legs.

His mind was invaded by his master's voice again commanding: "Report back."

Abor said quietly: "Mission completed."

"Now let's have the details. Did you make contact with Big X?"

"Yes."

"You made no mistakes programming Big X for the selection operation?"

"I repeated the problem word for word as you had outlined it for me, Master."

"How long did it take Big X to complete it?"

"Ten minutes."

"Ten minutes for Big X to run through all those millions of blocks?" Giltsoni asked again incredulously.

"I checked the time. Then I decided not to leave at once so as not to arouse suspicion."

"Very right and proper," said Alvar approvingly.

"The logical labyrinth turned out very simple."

"The labyrinth will do later," interrupted Alvar. "Did anyone suspect anything?"

"No. There was another problem though."

"What?"

"After I'd set Big X the job, I came over faint. I almost lost consciousness. My head started playing me up again."

Alvar caught his breath and said: "You've completed the mission, Abor: I'm indebted to you. Once I get out of the Crow's Nest I'll start looking into your health. But tell me now what

name did Big X give you?"

"Lili Charlot, aged 22, from the Eastern Ballet..." Abor continued in a monotonous voice.

"A woman?" Giltsoni had expected all manner of things, but not that. "No reason why not, I suppose. There have been women scientists before—Marie Curie ... Sofia Kovalevskaya ... Emma Noether ... Now we'll have to find this Lili and get to know her..."

"Anton Pulver, 54..." Abor went on.

"What?! Another one!" cried Alvar beside himself with amazement.

"Anton Pulver," repeated Abor in the same deadpan tone as before, "a junior clerk in the trading house 'Liebin and Sons'."

"Junior clerk! Like Albert Einstein. Bit on the old side though—Einstein was half his age when he came up with the theory of relativity. That doesn't necessarily prove anything..."

"Kron Flinn, centre forward in the people's football team."

"A footballer?" whispered Alvar almost aghast. "It's quite beyond me. But why people's?..."

Who else but people could play football? Not Martians surely? Venusians perhaps? It was at that moment that it suddenly dawned upon Giltsoni how behind the times he was, after the fifteen years cut off in the mountains. So many things would be strange to him...

"A possible candidate for the people's world team, aged 19," Abor went on.

"How many are there altogether ... of these

potential geniuses?" Alvar managed to get out at last. He looked at the screen with a feeling of hate as if Abor Isav was to blame for the unexpected abundance of candidates for formulating the unified field theory.

"Bit X named five."

"Who else?"

"Ligo Staven, an acrobat..."

"That's all we need!" groaned Alvar burying his head in his hands. "An acrobat, a clerk, a ballerina, a footballer... Why can't it be just physicists who take up physics? Who was the fifth?"

"Alvar Giltsoni."

"Me?"

"Yes, you, Master."

"But I..." Alvar began, but then broke off at a loss for words. After a long pause he went on in his customary voice, so firm and confident. "Come up from Dead Whale Bay tomorrow morning and fetch me."

"O. K."

"We'll be flying eastwards. We'll check out the ballet star." Giltsoni looked down at the packet of cigarettes and laughed to himself. During the conversation he had felt the urge to ask if Abor had by chance met Shella somewhere. He realised that the chances were very slim but the possibility was not ruled out altogether! Yet he had not asked even so. Now, when the end was nearer than ever before, he had no right to go off at a tangent.

Alvar went out of the dome to get some fresh air. The early shadows of twilight came to meet him.

His incarceration in the mountains was over, but without ending in the way he had dreamt it would. Never mind, he would now try to achieve his goal by other means. He would give mankind the world equation come what may. Countless generations would be grateful to him—questions are not asked of victors.

CHAPTER V

THE BALLET STAR

Beneath him there now stretched the spurs of low hills. The ornithopter was flying at a high altitude. Alvar felt that the machine was straining itself like an old bird whose days were numbered. Alvar gained altitude and then drew in the wings and switched to jet power.

Abor Isav sat slumped against the window. His vacant gaze followed the fleecy white clouds, which occasionally slid past. From time to time he would clutch the back of his head and his face would once more be twisted with pain.

When the pain had eased, Abor took from his pocket the hexagonal capsule of a biomemory device, and holding it up against his temple he began to record his thoughts.

“What on earth kind of thoughts worth recording can Abor possibly have?” wondered Giltsoni in disdainful mood. “They must be grey and monotonous like the clouds sweeping past the ornithopter.”

When the machine had passed beyond the capital and was heading east, Abor briefly showed his master how easy it was to use the biomemory capsules, if you wanted to note something in a hurry. No paper, no pencils needed.

“When was that device dreamt up?” asked Alvar turning over the capsule that Abor had passed him.

“Three years ago.”

“Who invented it, d’you know?”

“Charles MacGrown.”

“Not really?.. He always seemed so uninspired...”

Abor nodded down towards the capsule.
“Take it, Boss. I’ve got some others.”

Giltsoni gave the capsule back to him muttering that he preferred notebooks. Meanwhile he was wondering what the next few hours held in store. Perhaps by this evening he would be rich in the knowledge of the complete world equation! ?

The ornithopter was flying well, without any hitches as if it appreciated the importance of imminent events. Soon it would land and Alvar would go out into the city and mingle with the crowd... Then would come the theatre, the radiant primadonna, who as a sideline busied herself with elementary particle physics... She’s easy on the eye anyway—that was the only thing he was sure of for some reason.

The autopilot announced: “We are now ten miles from our destination.”

“We are coming down,” said Abor packing the biomemory capsule away in his pocket.

“The important thing is not to frighten this Lili,” thought Alvar as he stretched out his cramped legs. “She mustn’t suspect anything. The right approach is all important.”

During the years spent up in the mountain hide-out Alvar had forgotten all about finesse. To be honest though, he had never possessed much in the first place. Fortunately he had not lost the ability to appreciate his own faults and

at this moment, when fate was driving him forward into completely unfamiliar situations, he was all too well aware of the shortcomings of his own upbringing.

The ornithopter's wings were extended again and it began to float in the air like some gigantic bat. Abor got up from his seat and strode over to the hatch. The rays of the setting sun which had poured into the cabin during the steep descent momentarily picked out his powerful torso and broad palm clutching the rail.

"I wouldn't like to meet him on a dark night!" thought Alvar to himself.

The control towers had difficulty in picking out a free patch of tarmac for them to land on.

It would be hard to describe the emotions Giltsoni was experiencing as he jumped down to the ground. Alvar, like some kind of Prodigal Son, was now returning to his fellow-creatures after a fifteen-year absence. He was older but had plenty of life in him yet.

He walked slowly, pausing at frequent intervals. This must be how astronauts feel when they set foot on a new planet.

The two men came to a busy crossroads. Abor said nothing, waiting for his master's instructions. Still stepping carefully Alvar crossed to the most rapid of the moving pavements—far faster than those he had known fifteen years ago. Abor followed him like a shadow.

Alvar looked round hungrily taking in all the new sights that met his gaze. The buildings were even higher than he remembered them, as if they had grown in the interval, yet the people,

apart from their clothes, were just the same as before. In places the streets were lined with buildings that sloped outwards slightly from the fast-moving ribbon of grooved plastic, in others they were linked overhead which made Alvar feel that he was back in the Crow's Nest, in the ravine ringed round with mountain slopes.

It was not difficult to find the way and select the correct moving pavement: any passer-by was able to tell them the way to the theatre.

Few of the people on the moving pavement were standing still: most of them were moving forward, trying to gain another minute or two. Passers-by looked at Alvar and his companion in bewildered surprise.

As always happened when he was agitated, Alvar felt a wave of ravenous hunger come over him. So he decided to call in to a café before going to the theatre. They had their work cut out to get a seat, but finally found a free table in the very corner under a dusty palm-tree. The waiter blinked in amazement when the stocky customer with the bull-neck ordered half a dozen steaks. Alvar ordered a dish more or less at random, not bothered as to what it was so long as there was meat in it.

The two waited in silence for their meal. Abor was looking into the middle distance, only taking note of his surroundings when any young women happened to walk past. Meanwhile Giltsoni beat out an impatient rhythm with his knife and fork. He could hardly believe that in a few moments there would be a piece of real meat in front of him, no more canned food, no more chunks of that hated chlorella.

He tried to recall the smell of fried meat and sniffed the air in anticipation.

Abor was thinking about the last few action-packed days, about why for some reason he had woken up and had gone out to meet his master at dawn. Why on earth had he only yesterday risked his life to make his way through the labyrinth barrier set up to isolate Big X? He thought back to the problem set for Big X by his master: "To select from all those alive today the person who has (or will, given time) come nearest to a perfect..." He knew that there was something about physics after that and a complete picture of the universe involving long words that had seemed meaningless at the time. He kept tripping over them and they made him want to spit. Then there was the pain at the back of his head that kept plaguing him. It had hit him when, white with fear, he had mouthed the words of the problem at Big X in a mere whisper: it had felt as if an unseen hand had plunged a red-hot nail into the back of his head. Though Abor knew that he might die at any moment, even death would be easier to bear than attacks like that...

"Are you in pain?" asked Giltsoni interrupting his train of thought.

Abor shook his head cautiously as if afraid lest he might start the pain up again.

"Don't worry, Abor... Soon we'll have the cash we need."

Abor pricked up his ears at that and asked: "A lot?"

"I'll put aside a million for you! "

"Who's going to give it to us?"

"Mankind, in gratitude for our services," answered Alvar with a knowing smile.

"A million! That'll put me right then! "

"We'll fix everything," promised Giltsoni.

The waiter arrived with their order. Abor ate his way through the steaks with no sign of real enthusiasm. Alvar felt that the meat he had been served had a strange after-taste. He called the head-waiter and complained.

"What d'you expect? It's synthetic meat," was the polite yet bored response.

"But I didn't order synthetic meat! "

"We don't serve any other kind."

Alvar peered down at the piece of steaming meat which definitely was quite indistinguishable from the real thing.

"Where can I get genuine food?"

The head-waiter looked down at him with curiosity and asked: "You must be a foreigner, I suppose?"

"How did you guess?"

"You can tell immediately. Is this your first time here?"

"In a manner of speaking. The last time I was here it was fifteen years ago," Giltsoni replied.

"Fifteen years—that's an eternity," commented the head-waiter with a smile. "We really did serve real food here in the old days, but a good deal has changed since then."

"So I see."

As they talked Abor sat there with a glazed look on his face, chewing his way through the steaks.

"There's only one café left in the town where they serve real meat," the head-waiter went on.

“But a dish like that costs a fortune.”

He was called away then and after making his apologies withdrew in a dignified fashion. Giltsoni managed somehow or other to down his food, and while he did so found his attention caught by the young men at the neighbouring table. They were only sipping at their wine but were obviously tipsy. They were smoking a good deal though, and in a furtive kind of way: they would take a drag and then quickly hide their cigarettes.

When he took a closer look Giltsoni noticed that the cigarettes gave off very little smoke.

“What’s going on over there?” he asked.

“Where?” asked Abor not realising what he was talking about.

“Over there,” said Alvar moving his eyes in the direction of the young men’s table.

“They’re using narcotics.”

“Is that allowed nowadays?”

“Not really. But it’s good business for the café-owner and he closes his eyes to what they get up to,” explained Abor.

“What about the police?”

“One ‘good turn’ deserves another,” said Abor with a yawn.

Suddenly the frenzied beat of wild jazz number boomed out from under them. Startled, Alvar asked what the hell was going on. Abor explained:

“It’s the latest gimmick. They say it’s easier to dance when the music’s coming up from beneath you.”

Alvar paid for the meal and they went out into the street filled with deathly artificial light.

"Where do we go now, Boss?" asked Abor.

"Let's take a walk."

"We haven't got the time."

"What d'you mean we haven't got the time?" asked Alvar.

"We have to hurry."

"And where to, may I ask?"

"To fetch the money that you spoke of. You know that I've got to have it."

Alvar smiled: "Getting hold of money's not as simple as all that. Let's take a gentle stroll and work out how to set about things..."

Without listening to the rest of what Giltsoni had to say, Abor clenched his fists and started bearing down on his master. Giltsoni meanwhile simply slipped his hand into his pocket and Abor stopped in his tracks at once clutching at the back of his head and gasping in pain.

"Not again?" inquired Alvar sympathetically. Abor grunted something by way of a reply.

They found the theatre with no trouble at all. The old building squeezed between arrogant, more modern giants made a brave effort to keep up appearances. Yet the bronze lions at the entrance seemed to have given up long since, their expression had a mournful air about it.

Although there was over an hour before the performance, it proved very difficult to obtain tickets and they had to pay three times the official price. This amazed Alvar, for he had expected that, even if the theatre had survived those fifteen years at all, it would have been on its last legs by now. Yet here it was, the performance sold out, and besieged by enthusiasts.

Abor Isav, however, had never once been in

the theatre before. He took a sceptical view of art in general, regarding it as a futile and indeed harmful pastime. He only made an exception for ballet, although he had only ever seen that on television.

Now he just sat there peacefully waiting for the performance to begin and felt no excitement whatever as the curtain rose. As for Giltsoni, he too paid little attention to the story unfolding before him. He was more interested in the ballerinas themselves. How could he work out which one was Lili Charlot? Scene followed upon scene. Angry space-wolves danced a raging jig. An antelope wounded by hunters died a graceful death shedding real tears.

Then suddenly ... they were confronted by a miracle. Out onto the stage came a veritable Queen. With effortless grace she floated over towards her minions, who stood transfixed, their eyes rivetted upon her. Each of her movements was a poem in itself. The music flowed on, but it was not the orchestra which gave it life but the spell-binding pirouettes of the ballerina. To confirm his own impressions Giltsoni looked round at his neighbours. An old man in evening dress on his left was watching her through his opera-glasses transported into another world.

Even Abor had taken note, and there was an intelligent spark in his gaze once more.

Giltsoni felt a strong temptation to use his biotransmitter and bring his assistant right back to his senses or, to be more precise, to render him insensible with pain. He refrained not so much out of human sympathy but simply be-

cause he feared that Abor might ruin the magical moment: his attacks had been upsetting him particularly badly of late.

“Who’s that?” asked Giltsoni in an almost silent whisper into the pink ear of the old man next to him. The latter recoiled indignantly but then opened the programme on his lap and prodded a line which read: “Queen of Eridan—Lili Charlot”, words that filled Giltsoni with excitement. Once this Queen appeared on the stage the other characters ceased to exist for the audience. Giltsoni let himself succumb to the general hypnotic trance and had eyes only for Lili. Indeed, was it so very strange—he asked himself—that this Queen should master the new frontiers of physics? She might well be able to grasp at a glance all that went on around her. In that case the secrets of the micro-world might well be an open book for her... Perhaps she did not even suspect her divine gift, but what matter? It might make things easier, it might then be even simpler for her to impart her discoveries to Alvar. If she was reluctant... Alvar gripped the packet of tseon-filled cigarettes in his pocket at that thought.

At the end of the ballet Giltsoni left Abor at the theatre entrance, deciding that his conversation with the first of Big X’s candidates for genius should be in private. In the wings of the theatre it was very dusty. Giltsoni made his way down the narrow corridors taking note of the name-plates on all the various doors.

It soon appeared that Lili Charlot’s colleagues had a very different view of her than that shown by the enraptured audience. When Giltsoni

inquired where the primadonna was to be found, two other ballerinas exchanged knowing glances and started giggling; the man in uniform who eventually showed Alvar the way looked at him in bewilderment and seemed about to add some comment but then just shrugged his shoulders and walked on.

When he finally reached the crucial door, Alvar stood and waited for a moment to get his breath back and then gave a gentle knock. No one answered. Nor was there any response to his second, louder knock.

“Just go in,” suggested a ballerina who was running past.

Giltsoni gave the door a push and walked in.

The Queen was sitting with her face half turned towards the mirror as she took off her make-up.

“Good evening,” said Alvar.

Lili did not reply, just smiled and took a look at the visitor in her mirror.

“I hope you will forgive the intrusion...” said Alvar closing the door behind him and taking a few steps forward.

Lili still said nothing.

“I am taking this liberty on behalf of all your many admirers...”

The Queen continued to smile without saying anything and there was something rather pitiful about her smile. “It’s like a bad dream. Can’t she understand what I’m saying?” wondered Giltsoni in a sudden panic.

In an unexpected gesture just as graceful as those executed on stage, Lili pointed to her ears. “She can’t hear, she’s deaf,” realised Alvar.

“But then how does she catch the rhythm of the music as she dances?”

Giltsoni walked over to the dancer and made a bow of homage to her. Lili pointed over to a vacant chair. Each of her gestures was infinitely natural. Perhaps that was the secret of Lili Charlot’s success?

“But she’s a true queen, nonetheless...” thought Giltsoni. “A deaf queen, who now, without knowing it, will bring eternal happiness to one of her subjects.”

Alvar got out his notepad and a pencil and wrote out in clear large letters on the first page: “I am captivated by your acting.”

Lili echoed in a quiet voice: “Acting?”

“Your dancing is incredible,” wrote Alvar in a second message.

“D’you really like it?”

Giltsoni gave an energetic nod, pleased that they had at last found a means of contact.

“Everybody likes the way I dance,” said Lili quietly, “except one person.”

“But who can that be?”

“Me.”

“You?”

“Sometimes I feel that I can’t dance at all. Or at least that I could dance far better... That knowledge causes me real pain...”

Lili touched the bouquet of beautiful roses in front of her and smiled at her own thoughts.

“When I manage to dance as I really want to ... that is pure bliss,” she went on.

Giltsoni turned his notepad over in his hands. After thinking a moment he wrote on the next page: “Dancing isn’t everything in life.”

“For me there is nothing except the dance.”

Giltsoni was about to bring out his packet of cigarettes, but then let go again. He felt that Lili was telling the truth.

“Dancing is my whole life.”

The girl’s voice that was soft at the best of times was now reduced to a barely audible whisper. It seemed she was about to go off into some reverie.

Lili Charlot could of course be seen as a genius. In her *own* field. As a ballerina she was beyond compare—that was quite clear to Alvar. He realised just as clearly however that Lili Charlot, 22-year-old primadonna of the Eastern Ballet, was obviously very far-removed from the world of muonics, anti-particles and quarks.

Surely Big X could not have mixed things up and selected the wrong people! ? Surely an error could not have occurred, one of those that according to the laws of probability happen once in a million. Perhaps after all some chance impulse had made Big X pick on the wrong entry adjacent to the right one, but containing a completely different set of data.

Fortunately Big X had not limited his selection to Lili Charlot and Alvar Giltsoni, otherwise the list would already be exhausted.

As he came out of the primadonna’s dressing room, Alvar put his notepad away and brought out his address-book. Then he neatly crossed out Lili Charlot’s name.

He had already crossed out his own name, bearing in mind the nature of his fifteen years’ experience in the Crow’s Nest.

In the corridor a fat fellow with a drooping

lower lip caught up a now very down-hearted Alvar.

"You must be from the press?" he began.

Alvar quickened his pace, but the man would not give up. Shuffling along beside him the fat man went on: "We used not to have many visitors but recently there's been a stream of them. From the radio, from TV ... things are quiet today, you're the only one that's come, but other days there's a regular invasion."

"Really?"

"Lili Charlot's fame is spreading far and wide, like ripples on a lake."

"I'm glad for her," Alvar said grudgingly.

"Were you at the performance?"

"Yes."

"Tell me truly: wasn't it splendid! "

"I would have said not at all bad."

The fat man's lip pursed with disappointment. He had obviously been expecting an enraptured outburst.

"D'you know what they write about Lili in newspapers?"

"I don't read newspapers."

"How long ago did you stop?"

"Fifteen years."

"Not bad going! In that case let me quote some reviews for you." At that he brought out of his pocket a rather thick wad of cuttings. By now there was a whole fan of cuttings in his hand, which he then began to shake energetically in the direction of the visitor.

The conversation was now taking on a more interesting turn for Alvar.

"Where was that one ... just a moment...

Oh, yes, here it is! ” he took out the required page of newsprint and read in an expressive voice: “Lili Charlot’s dancing is a truly magical experience that conveys an idea of celestial bliss. It might well reconcile man with his Maker.”

“Powerful language,” commented Alvar with one of his wry smiles. “Incidentally provincial papers have always been prone to exaggerate. Mark Twain noticed that back in his day.”

“That’s a fair observation,” retorted the fat man. “But believe the experienced eye of an old director.”

He then took hold of Alvar by the lapel and said: “Dancing is the only thing that Lili Charlot can do. Yet no one on this earth can dance better than she does,” he announced in tones of triumphant pride. “You can put that into your paper.”

“Will do”, promised Giltsoni.

Near the mournful lions Abor was carrying on an animated conversation with a young ballerina.

“Let’s go,” Giltsoni muttered in his direction as he walked past.

* * *

Beneath them the earth seemed to wobble at first and then restore itself to an even keel as the ornithopter gained altitude and then set off on a new course.

Giltsoni moved away from the control panel, took a fleeting look at the slumped figure of a

half-sleeping Abor and then took his address-book out with a sigh. He opened it and drew a thick line beneath the second name on the list provided by Big X.

It was Anton Pulver, junior clerk from the company "Liebin and Sons". Why did Alvar think that this time he would find success? And what if Big X had come up with two disappointments in a row?

CHAPTER VI

ANTON PULVER

The ornithopter landed without mishap. The word "landed" however was hardly appropriate in this case since it came down on the flat roof of a building in the central zone of the town. According to the data provided by Big X this was where the second potential genius, Anton Pulver, was to be found.

During the flight Abor Isav had tried to ask Alvar why they had left the Eastern Theatre and all its pretty girls so quickly, how had his visit to Lili Charlot ended and, most important of all, where was the promised money?

"Give over," muttered Giltsoni, and Abor had obediently refrained from asking any more questions.

The air-space above the town was swarming with single and multi-seater flying craft—since it was the start of the rush-hour. Giltsoni and Abor looked for an escalator, that was actually working, and went down to the street level. The autopilot had brought them down at exactly the right spot. The building, where they now found themselves, was the administrative block of the firm "Liebin and Sons", as they could tell from its neon sign.

This time Alvar decided to entrust the first encounter to Abor whose job it would be to find on what floor and in which room Anton Pulver worked and report back the details to his master.

However Giltsoni's plan was thwarted by an unexpected obstacle. It had proved impossible to gain access to the company premises by conventional means. Soon after setting off on his reconnaissance mission Abor returned empty-handed: as he was in the act of walking up to the entrance, automatic cameras had scanned his image and registered that it did not belong to one of the company staff, and the steel turnstile had locked shut and denied the outsider a free passage.

"Liebin is better protected than Big X himself," said Abor in amazement.

Giltsoni explained: "Liebin's is a private fortress."

They had to work out a new plan, and after instructing Abor to wait for him Alvar set off to pace the streets to think. Giltsoni went walking for a long time but came up with no bright ideas. Eventually, feeling tired and hungry he turned into the nearest café. He had a quick snack and then decided to order a bottle of synthetic wine, tempting on account of its moderate price. Now that hunger and thirst no longer plagued him, Giltsoni set to thinking once more. Actually finding someone in a town presented no problem of course, but how could that person then be approached in such a way as to avoid arousing his suspicions?

There were two people sitting at the next table, and, without meaning to, Alvar found himself listening to their conversation as it grew louder.

"But I tell you that Liebin himself doesn't know a thing about perfumes," insisted one man.

“Don’t be ridiculous! ” objected the other.

“But of course he doesn’t! And the sons are just like Papa—all they want is profit.”

Giltsoni pricked up his ears. He realised that the two men were employees of “Liebin and Sons”. Fate had played into Alvar’s hands and he needed to make the most of this unexpected opportunity.

On tenterhooks, Giltsoni ordered a second bottle and asked his neighbours if he could join them at their table. The two men greeted his request in silence, trying to make out what Giltsoni was up to.

“What do you want?” asked one of them.

Alvar pointed to the bottle and said: “Won’t you help me finish it?”

“Can’t you manage on your own?” muttered the second.

“I don’t reckon so,” Alvar said, mustering up as friendly a smile as he could manage.

“All right then, we’ll help you out,” decided the first.

“Come and join us then! ” invited his friend.

The bottle was soon empty and Giltsoni called over the waiter and ordered another.

“I can see you don’t go short on money! ” commented the first young man, a very thin-looking fellow with an unhealthy pallor about him. Although he did not look over thirty, the hair at his temples was already grey.

The second man on the other hand was a cheerful fat character (in his mind Giltsoni dubbed him “Live-wire”) who responded as hoped to the free drink.

“Come on then, out with it,” demanded

Live-wire out of the blue. "What are you really after?" He moved his glass over to one side and looked Alvar straight in the eye.

"You work at Liebin's, don't you?" Giltsoni began.

"What made you think that?" asked the thin fellow.

"I overheard your conversation by chance..."

"Then you'd better stop eavesdropping."

"What's there to get worked up about?" interrupted Live-wire. "Three quarters of the town work for the Liebin firm anyway."

"So what if we do work there," said the thin man. "Where does that lead you?"

Alvar gave an embarrassed cough: "You see, I'm planning to settle in this town."

"And?"

"I'm on the look-out for work."

"Have you come a long way?" inquired Live-wire."

"From the Rockies."

"Why did you move out?" asked the thin man.

Alvar realised that they did not trust him, which was why they were giving him this grilling. He tried to make his next answer sound convincing: "It was incredibly boring up there in the mountains. Believe me, there's hardly a living soul to talk to."

The thin man shrugged and said: "What's so good about life down here? We're all crammed in on top of each other. And now all these robots that have appeared, bound to push out us people before we know where we are. We've had more than enough gimmicks already!"

"Come off it, things aren't as terrible as all

that," said Live-wire with a smile.

The thin man asked: "What's your line of work?"

Giltsoni picked a likely profession at random, and said: "Computer programmer."

Live-wire nodded and said: "So are we."

"Jobs are far from thick on the ground," said the thin man with a sigh. "D'you know how many unemployed there are in the town?"

Live-wire gave Alvar a hearty slap on the shoulder and said: "Chin up, old chap, we'll think of something. Won't we?" he went on, turning to his drinking companion.

"We'll try."

"Thanks, lads," said Giltsoni somewhat bewildered at the unexpected turn the conversation had taken.

"There'll be time for thank yous later," commented Live-wire, chewing away at his hors d'oeuvres. "For the moment..."

"Let's start the next barrel," rounded off the thin man, whose eyes were sparkling by this time.

Without his drinking companions seeing him Alvar felt his shrinking purse and again called the waiter over.

"Another bottle," said Giltsoni.

Live-wire brought his fist down on the table and shouted: "That plonk's only good enough for grandmothers. I don't think it would be a bad idea to mark our meeting with the real stuff. I've forgotten what it tastes like."

"So have I," echoed the thin man.

"First-rate idea," agreed Alvar, forcing a smile.

Alvar felt the difference between the synthetic wine and the real variety at once, although he would have been hard pressed to put it into words. But this was not the time for gastronomic niceties. Giltsoni made sure that the glasses were kept well filled with the costly beverage and soon all three of them had reached that blessed state where the world is yours and blow the rest!

"You were born with a silver spoon in your mouth, my lad," said Live-wire to Alvar in a confidential tone.

"Liebin needs programmers," explained the thin man, as he took a sip from his glass.

"What does Liebin actually produce?" asked Giltsoni, in yet another effort to bring the conversation round to the subject that really interested him.

"It's a well-known, international firm dealing in perfumery items," replied Live-wire. "But the perfumery line is of course just a front. In actual practice Liebin sells various types of dope under the counter, or quite simply drugs..."

"Any tseon?"

"That too... But wait a moment, you're not from the inspectorate, are you?" the thin man gasped as he clutched Alvar's hand.

"What got that into your head? I swear by the Almighty..."

"Come now, he doesn't look a bit like an inspector," said Live-wire in moral support.

"Liebin probably has the whole inspectorate in his pocket," said the thin man with a shrug of his shoulders.

Giltsoni poured the last of the wine into the

glasses: "I've been told that there are a lot of interesting jobs in Liebin's concern," he said, trying again to put out a feeler.

"For instance?" inquired the thin man looking at Alvar with a bleary gaze.

"What about jobs as clerks?"

"Clerks! " echoed the thin man with a drunken guffaw.

"Clerks! " exclaimed Live-wire taking up the refrain.

Alvar looked at the two men in bewilderment having no idea that the mention of that word would give rise to such an unexpected and wild burst of laughter.

"Don't mind us, mate," Live-wire managed to splutter out, finally getting the better of his laughter. "It's quite straightforward really. Old Liebin's round the twist," he explained, tapping his temple for emphasis. "He loves anything antique, the good old days, little old sayings and all that kind of thing. That explains the word 'clerk'. He uses it as a label for all the programmers that work for him."

"So a clerk is a programmer?" Alvar inquired once more to make sure with rather a foolish expression on his face.

"Precisely," confirmed Live-wire with another loud guffaw.

Alvar felt as if he had known these two good-hearted, friendly fellows for years, for almost as long as he could remember, and that he was just one of them, just another hard-working programmer enjoying an evening's drinking. Fifteen years of selfless dedication, the world equation, the mountains, the Crow's Nest had

become little more than a dream. If only he could live like that without any special worries, with every-day interests and without a thought for the big wide world outside. How nice to be able to saddle some convenient Atlas with all the work...

“And who’s your best programmer?” asked Alvar after they had exhausted a whole number of other topics.

Live-wire wiped his lips and replied: “Anton Pulver.”

“Anton Pulver,” echoed Alvar. That happy news was like a flash of lightning.

“Have you heard of him?” asked the thin man.

“Yes, I have,” admitted Alvar.

“Nothing surprising about that. Our Anton is a real genius,” stated Live-wire.

“Genius?” inquired Giltsoni getting more excited with every moment.

“But of course,” confirmed the thin man.

“Aren’t you exaggerating though?”

“Anton could calculate anything in a trice, there’s no doubt about that,” went on Live-wire.

“He can cope with problems that confound a calculator,” added his friend.

“Then why is Anton Pulver no more than a junior clerk?” asked Alvar.

His drinking companions exchanged glances and then the thin man said: “That’s another of Liebin’s quirks.”

Live-wire explained: “Our Boss holds that the senior programmer is God himself. This means of course that employees in his firm can only be junior programmers.”

Alvar felt that any drowsiness brought on by the wine had rapidly deserted him.

"Does he happen to dabble in physics at all?" asked Giltsoni as if he was just tossing out a random question.

"Perhaps he does," said Live-wire with a shrug of his shoulders. "None of that means anything to me."

Alvar stopped himself from going on with that line of questioning in case he aroused their suspicions. "Our Anton would have left Einstein gasping!" the thin man exclaimed unprompted.

"Come on now!" came Giltsoni's response, designed to egg on the others.

"I'd stake my life on it."

"And d'you know, my good friends, what one of my life's ambitions has been?" said Giltsoni.

"What then, little fellow?" asked the thin man in a bored voice.

"To meet a real genius, someone like your Anton Pulver."

"What's to stop you?" inquired Live-wire.

"It is easier for a sinner to enter paradise than to enter your company's premises."

"That's true," agreed Live-wire. "Old man Liebin is as wary as a hawk, and the security at our place is just nobody's business."

"They say it's as tight as that surrounding Big X," added the thin man.

Fortune was obviously playing into Alvar's hands. His new-found friends agreed to introduce him to Anton Pulver with no trouble at all. They arranged a time for the next day since it was too late to go that particular evening.

When Giltsoni arrived back at the hotel Abor

was already asleep. He was breathing heavily as if he was lifting a stone slab with every breath he took.

Giltsoni felt a sudden wave of compassion for his captive assistant come over him. "I'll give him his due," thought Alvar in his now magnanimous mood. "I'll set aside a million for his treatment. And why not? Perhaps doctors will be able to help him now. There have been so many new inventions over these last few years."

Humming to himself, Alvar flopped down onto the bed. Abor had rented cheap rooms, just as Giltsoni had instructed him. At the slightest movement the bed creaked, and the air in the room was heavy and stale. But what difference did any of that make?

* * *

The house in which Anton Pulver lived was in the suburbs.

"It's a good way from here," said Alvar to his new friends.

As he was now to find out, Live-wire's name was Elgar and the thin man was known as Nicholas. Today they were not quite so exuberant but both seemed just as friendly towards Alvar.

When the group reached the right floor, Nicholas rang. It was a tall old man who came out to meet them. His face, like that of a venerable patriarch, wore an expression of bewilderment. His grey mane reached down to his shoulders. He was as thin as a rake and had slightly hunched shoulders.

"According to Big X he's 54," recalled

Giltsoni, "but he looks a good ten years older."

Anton Pulver was still standing there blocking the doorway and looked at the visitors without much enthusiasm.

"We've brought someone to see you, Anton," said Nicholas.

"Well, come in then, seeing you're here," muttered Pulver moving aside to let them pass.

Giltsoni looked round the room where he now found himself. Two walls consisted entirely of shelf units right up to the ceiling. The shelves were all crammed with memory blocks and books. Giltsoni screwed up his eyes trying to make out the titles on the spines of the books.

It looked as if Pulver lived on his own. The room was in utter chaos. The table was piled high with papers and biomemory capsules and there was a thick layer of dust on the sill of the only window, which was wide open.

"Anyone who wants to can sit down wherever they like," Anton proffered.

Giltsoni sat down in an arm-chair with a back that was caving in. Without asking any questions Pulver walked over to one of the book-shelves, pulled out a large book and handed it to Alvar.

"What's that?" asked Giltsoni.

"Karl Schenker's twelve-figure tables," replied Pulver. "A manual that's indispensable for psychoprogrammers like them," he explained with a nod in the direction of Giltsoni's new friends, who had sat down together on a narrow sofa of nondescript colour.

"But aren't you a programmer too?" asked Giltsoni in surprise.

"You're right, young man," Pulver said.

"I'm a clerk just as they are. It's just that I don't need that manual because I know it by heart."

"The whole thing?" asked Alvar quite incredulous, feeling the weight of the book in his hands once more.

Elgar and Nicholas smiled: it was most likely not the first time they had witnessed this display of skill.

"Try me," suggested Pulver.

Giltsoni opened the enormous volume at random and then read out the first line his finger landed on: "The sine of twenty-four degrees, eighteen minutes and thirty seconds."

Pulver shut his eyes for a moment. His face froze over as it were and looked almost blue in the light from the wall panels, that had been turned on, now that it was getting dark outside.

A second later Pulver came out with the answer. Alvar checked and discovered that it matched up with that given in the manual.

"Amazing," he gasped.

Pulver smiled briefly, highly satisfied with the effect he had produced.

"Let's have another round."

Alvar took examples from all sections of the manual, but the "junior clerk" was spot on every time.

"It defies the imagination to think that any mere human being can retain all that," said Giltsoni at last, clapping the book shut.

"That's a mere trifle," commented Pulver. "I'll show you something much more interesting now..."

He went over to the table, rummaged through

some things on it and at last handed a shabby old calculator over to Alvar, like the one which had served him in the Crow's Nest so faithfully all those years.

Giltsoni was now a witness to a fantastic contest between man and machine, in which the calculator definitely came off worst. Each time—even if only by a mere fraction of a second—Anton was ahead of the calculator with his answer.

Giltsoni was filled with a deep sense of anticipation. He walked over to the open window. There was not a breath of a breeze to be felt in the sultry air. Every now and then silent flashes of lightning were to be seen in the distant sky. Wherever he looked, there loomed the grey giants of the old suburban buildings.

"I'm overwhelmed," said Alvar.

Pulver shrugged casually and said: "That's only kid's stuff."

"You mean to say..."

"I mean that I prefer more complex problems to this basic arithmetic."

"For instance?"

"For instance, differential equations, or, say, a sequential integral."

When Anton Pulver, with the same spell-binding facility started differential and integral equations in his head and without recourse to pencil and paper, each equation more complex than the one before, and in so doing brought the calculator to a halt, Giltsoni was finally convinced that this time Big X was on the right track and that the world equation was within his grasp.

Yet how could he lead up to that subject, to the all-important equation?

“Could I have a look at the books and see the kind of things you’re interested in?” asked Alvar looking over towards the shelves.

“Go ahead,” said Anton.

Giltsoni walked over to the shelves and took out a book at the end of one of them. *Numerical Solutions for Differential Equations* was the title and this was followed by *Pointers for Rapid Calculation*; then came *Memory Training in Operations Involving Large Numbers*, *The Computer Wizard, I Maintain: Man’s Memory Is Limitless!*, *Methods for the Integrated Control of Our Own Memory*. Interesting of course, but what bearing did it all have on physics?

Alvar walked over to another set of bookshelves. He was looking through the memory blocks and books so frenziedly that Pulver’s attention was caught. “Are you looking for something?” he asked.

Giltsoni was rather taken aback and murmured: “There is one thing...”

“What?” asked Pulver, in a more benevolent tone than before.

“I don’t see any books on physics here.”

“What would I want with them?”

“I wanted... I was thinking that if your incredible mathematical talents could be extended to the field of physics...” Alvar stopped then in his tracks, not knowing how to finish his sentence.

Pulver however came to the rescue and said: “You’re wasting your time, young man.”

Giltsoni looked up at him in a bemused fashion.

"I have no time for that science."

"For physics?" blurted out Giltsoni in a voice that had suddenly turned hoarse. Anton Pulver hating physics? But that must just be a very sick joke!

"Yes, yes, physics," Pulver repeated in an irritated tone by this time and started striding up and down his room.

"Why?" Alvar persisted.

"I don't make a habit of explaining things like that," said Pulver. "I will to you though," he added, closely perusing Alvar's face as he spoke. "You probably worked in that field at some time, or perhaps you still do?"

Alvar nodded.

"That's what I thought," Pulver went on. "So, I intend to do you a favour."

Giltsoni lent back against the book-shelves to listen.

"Physics! " burst out Pulver with unexpected force. "Physics! The science that holds the key to Nature! But how could a wretched human mind ever fully understand Nature? Surely the experience of several thousand years is enough to show us that each riddle solved merely gives rise to dozens of new questions, and the answer to each of those gives rise to hundreds of further problems, and so on and so on *ad infinitum*... The human race is like a child lost in a forest. What he needs to do is to turn round and retrace his steps, then there might be some chance of ultimate survival. But no, he tramps on and on, forging a path through the undergrowth, delighting in the flowers he picks on the way, not realising that each step forward brings the

fatal outcome that much nearer."

Alvar licked his parched lips. Where was it that he had heard or read those words, those flowery phrases?

"The little boy's lost; I realised that a long time ago!" went on Pulver, pausing in front of Alvar. It was not really clear by now whom he meant: the human race, himself or Giltsoni. Perhaps Pulver was having him on, putting him off the scent?

"The premises you start out from have no foundation," said Alvar.

The room they were in—where you could cut the air with a knife—seemed to be slowly spinning round him. This annoyed Alvar for it stopped him from concentrating properly.

"Are you working on the unified field theory?" asked Pulver all of a sudden, stopping right in front of Giltsoni.

"Yes."

"My sincere advice to you is to drop it like a hot cake!" urged Anton. "The sooner the better, what's more."

Nicholas and Elgar exchanged bewildered glances.

Pulver, the "junior clerk", was standing in front of Giltsoni and from the side it looked as if a furious teacher was hauling a wayward pupil over the coals.

"Yet, you, it would seem, were not so sensible," giped Giltsoni.

"What are you getting at?"

"You advise others to leave physics well alone, yet you yourself have eaten from the tree

of that knowledge," insisted Giltsoni in slow deliberate tones, looking Pulver straight in the eye. He had the feeling a sudden shiver had come over Pulver.

"You're mistaken, my young friend," said Pulver. "I never ate of that fruit."

Giltsoni decided to challenge him head on: "D'you think I didn't realise why there wasn't a single physics book on your shelves? You deliberately destroyed them all, so that no one would suspect what you had discovered."

Alvar had the feeling that a crazed look had come momentarily into Pulver's eyes.

"D'you know what Einstein's tragedy was?" retorted Pulver. "He was born too early. By the mid-twentieth century too little was known by physicists about the world of the atomic nucleus. In those days our world was referred to as 'strange', and in scientific articles what's more! That word alone reflects their helplessness, surely? A genius has to start out from facts. Any great mind is inevitably held back by the limitations of his time. His pedestal is provided by the level of achievement of contemporary science. If that pedestal is too low, can man attain the summit, even when he's a giant?"

Pulver paused for breath and then went on: "I was more fortunate than Einstein. By the second half of our century scientists had assembled a whole Mont Blanc of experimental data, unknown in Einstein's day. One might even say that the sheer volume of scientific facts swamped the very space which they were designed to elucidate..."

Alvar was no longer really listening to what Pulver was saying. He was wondering how he might drag out of the "junior clerk" the information he required. It did not look as if he would part with it voluntarily.

He would have to use the tseon cigarettes. A small dose would rob a man of his will-power. A large one would render him unconscious. There was no need for one of those: Alvar had no intention of kidnapping the "junior clerk". He needed to find out how much he knew when it came to theoretical physics. It was no good allowing for the level of his knowledge to improve with time in view of Pulver's considerable age.

What was important now was to get rid of Nicholas and Elgar. Alvar brought out a packet of cigarettes, but did not unwrap it.

"D'you mean to say you smoke?" asked Nicholas.

"I smoke, when I get worked up," answered Giltsoni rather curtly. One thing that was true was that, by this time, he was well and truly worked up. After patting his pockets, Giltsoni declared: "Bother, my matches are still in the hotel."

Alvar's plan was relying on the fact that neither Elgar nor Nicholas were smokers. Pulver also did not appear to be a smoker.

"Let's go to the kitchen," suggested Anton. "There's an electric lighter out there."

In the kitchen Giltsoni brought out a cigarette, lit up and blew out some smoke towards Pulver in a casual fashion. A blue hardly perceptible cloud hung in the air for a moment.

"Strange cigarettes you've got there," said Pulver.

"What about them?"

Pulver started coughing and said: "They smell of something ... sweet, don't they?"

Giltsoni smiled and said: "They're my favourite sort."

"What are they called?"

"Cosmic Dream."

"Never heard of them," commented Pulver, shaking his head.

Giltsoni tried to stand as far as he could from the smoke cloud. When they went back into the other room, walking behind his host, Giltsoni put out the cigarette that he had hardly started and placed it back into his pocket: there was no point in leaving evidence behind him...

The surprised expression on Pulver's face quickly gave way to a grimace of discomfort.

"Forgive me, I don't feel too good," he muttered and sat down on a chair. He was breathing heavily as if he had just been running fast. "It's close outside."

"There's a storm gathering," said Nicholas.

Elgar rose and fetched Anton some water. He made a face as he took a mouthful.

"Anyone would think he'd been passed a cup of poison," thought Giltsoni to himself. He felt that he was not involved in what was happening, not a criminal in any ordinary sense of the word, but an observer of what was happening on a stage. The first acts of the tragedy had turned out rather ridiculous really, but here at last was

the finale almost upon them. Giltsoni brought out his pencil and notepad, which was rather scruffy by now after all the fruitless journeys it had made.

Logical consistency was essential now. Alvar needed to start out from the simple and work through to more complex questions. At first he would ask some questions touching on the fundamental principles of physics and then move on to the unified field theory.

Alvar asked the questions and Pulver obliged with the answers. But what kind of answers was he coming up with! He lost his bearings over a question that a first-year student would be required to know. Had he forgotten the basics? That was out of the question! Giltsoni had only just been witnessing what Pulver's memory was capable of. As for the tseon, a small dose could paralyse a man's will-power but never his memory. There was no turning back now, the die was cast.

"Write down the equations for the unified field theory as you see them," requested Giltsoni interrupting an awkward silence, and he placed his open notepad on Pulver's lap.

Pulver picked up the pencil handed him and looked at it attentively, as if he was beholding this highly interesting object for the first time.

At last he announced: "I can't write down those equations."

"You *can't*?"

"How can I do what the greatest minds of the human race could not achieve?"

Alvar clenched his fists in a frenzy of despair. He was ready to throw himself at Pulver and tear

him limb from limb. But what was the good? There was no doubt about it. Anton Pulver was telling the truth.

"But where did you hear about it all?" asked Giltsoni, still nursing the forlorn hope that somehow things would miraculously turn out right.

"About what?" asked Pulver curtly.

"About space and time, about elementary particles, about the unified field theory."

"I read about it all," replied Pulver. "A long time ago, a good fifteen years. Oh yes, I remember now... That was where it was all discussed and in such clear, interesting terms..."

"Was the author of the book Mark Nusch?" asked Giltsoni, guessing by this time where Pulver had gleaned his knowledge of physics.

"Yes, yes, that's right," said Pulver, sounding pleased. "God—or at least mankind's God—is he who will eventually erect the mighty edifice of the unified field theory," he quoted slowly with an air of triumph.

"What's that?"

"Mark Nusch, *The World Locked in Equations*, fourth edition, page 289," he explained.

"But you're brilliant at calculation, for heaven's sake!" shouted Giltsoni, unable to restrain himself any longer. "Before my very eyes you outstripped the calculator in solving differential equations. That's out of this world! Or is that a mere flight of fancy as well?"

Elgar added: "Anton calculates better than anyone else on earth."

“I’m not bad when it comes to calculation,” admitted Pulver. “As a child I would be used for demonstrations in teaching hospitals, as an inexplicable phenomenon of nature. I cracked equations systems containing many unknown quantities like so many nuts, not even stopping to wonder how I managed it.”

“But physics? Did you really never turn your hand to that?” asked Alvar.

But Pulver was listening to something within him, imperceptible for others but infinitely important for him.

Giltsoni repeated his question.

“Physics? Unfortunately never,” said Pulver, shaking his head. “But perhaps it was all for the best.”

Beside himself by now Giltsoni snatched back the notepad and pushed it into his pocket. On his way out he banged into the door and hurt himself. On the landing it was cooler at last.

Nicholas and Elgar who had watched the whole of the last episode in astonishment, got up and quickly took their leave.

“Cheerio,” came back Pulver’s indifferent voice from the depths of the room.

When the distraught Alvar came out of the building he felt the first drops of a shower fall on his face: rain had been threatening all day. Nicholas and Elgar could hardly keep up with Alvar.

So here was yet another fiasco. Big X had messed things up again. By now Giltsoni was starting to think there was some kind of logic behind the muddle. But what? That

was something he had failed to work out so far.

Whatever else might come to light, yet another hope was exploded, like a mere soap bubble. It was all Alvar could do to get a grip on himself. After all the list was not exhausted yet. There were still the footballer and the acrobat. He had to go through with it. Not a single stone must be left unturned.

"Don't worry, mate," said Nicholas with a friendly pat on the shoulder. "You'll get a job in Liebin's outfit."

"You'll be in the money too," comforted Elgar. "You're just as quick off the mark as Anton."

The storm overtook them halfway to the hotel. The thunder rumbled on and on. Alvar was soaked to the skin by the time he arrived.

* * *

Alvar learnt to master the skills of a psychoprogrammer fairly quickly. The pay in Liebin's employ was reasonable and he managed to save something. Alvar needed this money to continue his search for a genius.

The work of a psychoprogrammer was monotonous and in the main simple, although it had so far proved quite impossible to entrust it to machines or the new generation of "proto-robots" which had appeared a few years ago. Liebin's "clerks" worked away at advertising and marketing problems, trying to predict the psychological response of the individual custom-

er which at the best of times has never been something that was readily susceptible to programming.

Things started to go much better after Abor Isav managed to fix himself up with a job in the space-port. All the work there was carried out by proto-robots, but it soon emerged that Abor was able to compete with them quite successfully.

After work one day Giltsoni happened to bump into Elgar. At first he failed to recognise him. He was only a shadow of his former self.

“What’s up with you, Elgar?”

Live-wire shrugged his shoulders dejectedly. “That walk of ours backfired,” he said.

“What walk?”

“Our walk to visit Anton. I got wet on the way back and caught cold and now just can’t seem to get back on my feet again. It’ll be nearly a month soon, but I still can’t shake off this cough.”

“D’you mean to say they still haven’t learnt to control the weather here?” Alvar let slip.

“ ‘Here’! What d’you mean?” asked Elgar. “Where’ve you been then, the moon?”

“What I mean is here in this town,” said Giltsoni trying to gloss over his blunder.

“You’re a bit behind the times, my friend,” said Elgar. “There’s one centralised outfit dealing with the weather and that’s in the capital. There’s not much work going on there nowadays though. They’ll be closing the place down any minute.”

“What d’you mean, closing it down?”

“Some time back, about ten years ago, people got carried away with weather-made-to-order and there was absolute chaos,” explained Elgar. “One person would want rain, another in the same place would be clamouring for dry weather, while a third would want something different. Well, two or three years ago the President turned to Big X for advice and his solution was: leave the weather to Mother Nature and don’t use artificial means to control it.”

“And does he never make mistakes?”

“The President?”

“No, Big X.”

“You must be joking!” said Elgar with a smile, which at once made him look more like his old self.

“I haven’t seen Pulver around recently.”

“You mean to say you haven’t heard?” said Live-wire looking at Alvar in astonishment. “He’s gone to pieces, has our Anton. That all started after our visit too, that meeting must have had a jinx on it.”

“What’s the matter with him?”

“Insomnia. He’s complaining of memory loss too,” Elgar explained. “And memory’s everything for him, as you know yourself.”

Alvar nodded and then asked: “D’you know what he’s got?”

Live-wire shrugged his shoulders and said: “Doctors are still unable to decide what it is. I think it was the storm that was the last straw. He was never very strong, Anton, it’s a wonder he ever kept body and soul together. He liked playing to the gallery, that’s true, but he was a good sort and was always willing

to help his colleagues. Nicholas and I are planning to go and see him, because he's not able to get out at the moment. Will you come along too?"

Giltsoni replied in a dry voice: "No time."

"Some friend you are," said Elgar, and without saying goodbye he walked off.

CHAPTER VII

KRON FLINN OR A TOUCH OF SCIENTIFIC FOOTBALL

So the amazing sequence of mishaps and incongruous circumstances that had begun with Lili Charlot, the deaf primadonna of the Eastern Ballet, continued to unfold.

The second link in the chain, no less strange than the first, had been the phenomenal "human computer" Anton Pulver, "junior clerk", with the company "Liebin and Sons".

There was no point in trying to puzzle out the riddle Big X now confronted him with: Giltsoni had decided he must first press a heed and check all the candidates put forward by the President's electronic "aide". His gambler's instinct would not let him stop half-way.

The one thing that gave him the courage to go on with the search was the fact that he too had been included in the list, that is someone who had been working so much on the unified field theory and who had apparently achieved such promising results so far...

Once Alvar had earned enough money at his temporary post the question then arose: who should be next on the list? There were still two names and which one should be pursued first?

The candidates were both about the same age and both from the world of sport: one was a gymnast (or acrobat, which as far as Giltsoni was concerned was one and the same thing) and the other a footballer. Giltsoni was a com-

plete stranger to that world, he had never felt drawn to that sphere of human activity.

* * *

The next flight was scheduled for the following day. Giltsoni was roaming about the streets. He had just stepped off the moving pavement and was making his way towards his hotel. Liebin saw to it that his staff earned their keep, and Giltsoni's back was almost breaking from tiredness. He had received all the back-pay due to him and would be setting off again tomorrow.

Ahead of him Alvar noticed a woman standing in front of a brightly lit shop window.

Alvar slowed down, his legs suddenly went as heavy as lead. Could it be Shella?.. What would she be doing here? The woman was standing with her back to him. Holding on to the handrail, she was leaning forward peering at something very hard. Should he go up to her? Alvar stopped, undecided. People walked round him, cursed him, but he was oblivious to it all.

After all hadn't he decided to give her up in the past? What could he offer her anyway? There was no point in deceiving himself. Shella had probably long since forgotten him. And even if she hadn't? What use was he to her—the genius that hadn't made it?

Was it her or wasn't it? All Alvar needed to do was to take a few steps forward to make sure. Yet he held himself in check.

The woman stepped back from the shop window and soon disappeared in the crowd.

* * *

The sports complex appealed to Alvar. It made him think of Toyland. The cottages, the green open spaces, the almost total absence of transport and the air, the wonderful fresh air!

The whole morning he wandered about the streets relishing the small town's unfamiliar atmosphere. He caught snatches of conversation from the people who passed him by. If only he could live there for always, be one of those fit sun-tanned youths, and only have to worry about keeping to a tough training schedule compiled by an individually programmed electronic trainer!

Giltsoni thought to himself that if fortune were to smile on him this time and Kron Flinn could help him finalise the world equation then the best plan would be to stay out here. Then he could search out Shella... As for fame, its ripples would spread even this far.

When he set off into the town Alvar instructed Abor to remain by the ornithopter. In this sports township there was no clearly defined centre, or outskirts either for that matter. That made it difficult for Giltsoni to say in exactly which part of the town he had come across the enormous sign reading: "Stadium". He stopped in his tracks and thought to himself that it was the obvious place to look for a footballer.

Unlike the stadiums that Alvar could remember from the old days this one had no stands for spectators. All that he could see was training apparatus that meant little to him, and the football field itself. The actual field though was a joy to behold! It was beautifully smooth, with even, close-cut grass. Giltsoni crossed over the cinder-track and patted the almost silken surface. The grass was fresh and green. He assumed that the grass was sown by machines. Perhaps it was a machine too, which saw to it that all the blades of grass were identical?

The stadium was completely deserted. Alvar overcome with tiredness stretched himself out on the grass not far away, beside an open swimming pool on which were floating some yellow leaves. He gave a gentle squeeze to the trigger of his biotransmitter so that Abor could identify his location; then he nodded off.

When he woke the unseasonably hot sun had sunk a long way towards the horizon. However its warmth was tempered by cool gusts of wind, with a touch of autumn about them. Giltsoni got up from the grass, and stretched himself.

There were now two teams out on the field—one in dark blue and the other in yellow shirts.

"The colours of the national team," Giltsoni whispered to himself, sleepily rubbing his eyes.

The teams started play. The game—or perhaps it was just a training session—was being refereed by an electronic device that looked like a spider. From a distance its movements looked clumsy, yet it always seemed to pop up in just the spot where it was required. The spider refereed with a confident air and all its decisions were accept-

ed by the players without a murmur. This was no wonder, for unlike ordinary old-style referees the electronic "spider" had eyes all round its head and was able within a fraction of a second to assess any situation that might develop on the field. Every nuance of this fascinating game had been fed into its electronic memory, not to mention all the clauses that go to make up the soccer rule-book.

When Giltsoni had first emerged from his Crow's Nest he had heard from various people about football matches played by robots, which had at one time gained considerable popularity. They had made an interesting spectacle initially and to start with the firms controlling the trade in protein-powered players had struck it rich and flourished.

However the boom was not to last for long. There was something missing in the robots' matches. Perhaps it was just the absence of the element of chance? Or having none of that grim determination that makes a player risk anything, even his own neck? For one reason or another fewer and fewer spectators started turning up at robot matches.

The firms that by this time were in the doldrums tried every gimmick they could dream up. One of them decided to reduce the robot-footballers' instinct for self-preservation. However that did not save the situation. In the opening minutes the game degenerated into a punch-up: several defenders all at once threw themselves upon the player in possession and then the forwards from the attacking team waded in. Soon all that was left was a brawl involving all twenty-

two robots. It no longer resembled football but more a playground free-for-all.

Rules did not come into it any more! The frenzied robots fought each other to the death. Claws clamped on to rivals' limbs so tightly that the robots could not pull free of each other. They needed pulling apart by tractors, and left behind on the football field—or to be more precise the battle field—would be a whole pile of twisted components.

The firms that had had a large stake in mechanised football also experimented by reinforcing the footballers' instinct for self-preservation. There was no longer any hint of battles for the ball, let alone any skirmishes on the field. Afraid of the slightest trifle, let alone scratches or real injuries, the "players" would veer away from each other like two positively charged particles on a collision course.

This did not heighten the public's interest in football either. It was imperative to give the sport a new lease of life. It was to this end that the sports complex in the small town that Giltsoni and Abor had come to had originally been built.

The game today was extremely lively. The ball kept bouncing back between one goal and the other. The rippling trills of the "spider" referee's whistle alternated with the thuds of boots hitting the ball. Giltsoni's attention was caught by a youth who looked no more than a boy. Initially that particular player had seemed slower than the others. Soon, however, Alvar realised that first impressions had been deceptive. It only stemmed from the fact that this

player did not make a single superfluous movement. Once he had possession though, he was transformed. It was like an explosion of a firework. He flew towards the goal, weaving his way round first one defender then another.

Although Alvar was completely at sea when it came to football, the game of this swarthy-faced youth fascinated him. As he watched his light-footed, graceful movements, reminiscent of a panther, Giltsoni was for some reason reminded of the ethereal steps of Lili Charlot, another of Big X's candidates for genius.

A piercing whistle from the referee brought the game to a stop. A penalty kick was given to the side in dark-blue shirts. The player chosen to take it was the young footballer whose play had caught Giltsoni's attention.

The young lad froze motionless as he waited for the signal. The whistle went and, after a short run-up, he side-stepped the ball, as if to leave the kick to another member of his team, but with an incredible 360°-turn, the player managed to land a devastating shot. The ball flew into the net, and the goaikeeper clutched his head in despair.

If fans had been present they would have rocked the stadium. However there was only one spectator present.

The "spider" referee signalled the end of the first half and the players started moving over to the centre of the field.

"Kron! " came a voice from somewhere.

The swarthy lad turned in the direction of the call, revealing gleaming white teeth, as he smiled.

So it *was* him! He had been right. He who seeks shall find! Now Alvar had to introduce himself. So as not to arouse suspicion he decided not to hurry.

The next day the morning was clear and sunny again. Giltsoni left Abor behind in the hotel and himself made his way to the now familiar stadium. He was later than planned—the yellow and dark-blue shirts were already on the field, going all out to win control of the ball. One of the players nodded to him as if to an old friend, and Giltsoni nodded in reply. The others paid no more attention to the sole spectator than if he had been a post or a pile of leaves.

While Alvar watched the game and wracked his brains wondering how he might contrive a meeting between himself and Kron, his brains were almost knocked out in the literal sense.

A defender for the blue shirts lifted the ball for a throw-in. Giltsoni, who had been standing on the very edge of the field, turned his head to follow the path of a high lobbed ball. At that moment before him, there was a flash of yellow lightning and with a superhuman leap the pass was intercepted and the ball steered with absolute precision towards another member of the yellow team, as it moved towards the opponents' penalty area. Kron Flinn took a brief glance at the unexpected obstacle, as if it had been no more than an inanimate object.

They exchanged glances again, a moment later, when Big X's candidate was bringing the ball down the left side of the field. He was taking things in his stride, almost dancing, and Giltsoni was once more reminded of Lili Charlot.

Meanwhile Kron Flinn carved his way through the defenders like a hot knife through butter, then went on to score the next goal.

Alvar waited till the team emerged from the dressing-room, and then made his way over to Kron Flinn with resolute steps. Giltsoni was ready for anything: mistrust, caution, even hostility. However it all turned out much more pleasant and straightforward. Kron proved to be a most likeable lad, whose fame had not gone to his head at all. Remembering his visit to the Eastern Ballet Company Giltsoni introduced himself as a reporter. He began by a few standard questions, and then—though hesitantly at first—their conversation really got under way. They walked along talking, just the two of them: “I’m interested in football,” began Alvar. “I am sure that it is time to give up matches between robots and go back again to games played between teams of people.”

“I dream of that too,” said Kron in keen support, patting down his hair that was now damp after the shower.

“You see, Kron...”

“How d’you come to know my name?”

“I heard it shouted out at the stadium. I’m convinced that a contest between machines can only be of interest to an engineer—to see which team has the better programming.”

“If only everyone realised that.”

“They will eventually!” promised Giltsoni. “The central passage in my article will be devoted to the centre forward in the national team, Kron Flinn.”

“There’s no need for that.”

"I appreciate your modesty."

"That's not the point," said Kron. "Don't you know that not a word is published about us till the human team is finally selected?"

"I know," nodded Alvar. "I want to get the article ready in advance. I shall publish it as soon as the ban is lifted."

They were now walking along a quiet little street bordered with plane trees. There was an athletic spring in Kron's gait. He was still as fresh as a daisy, despite having just completed a full-length match.

Kron started talking about football again. Giltsoni tried to keep the conversation going and succeeded. Picking a suitable moment he decided to switch to the all-important topic.

"Am I right in thinking," Giltsoni began, "that you go in for other things as well as football?"

"What?" queried Kron in surprise.

Alvar looked at him hard and said: "I thought you went in for something else as well."

"For instance?"

"Like physics."

"That's amazing!" exclaimed Kron. "How could you have guessed? I do indeed spend my spare time on physics, but not a soul in the world knew about it."

Giltsoni's heart started pounding.

"As I said before, we, reporters, have our professional secrets!" he declared.

At last the rod had quivered and the line pulled taut. Here was a bite! Thank heavens for Big X! Now the main thing was to catch the right moment and not frighten the fish. It

looked as if he would not have to resort to the tseon cigarettes.

"For me though, the main thing in life is not physics but football," explained Kron.

"Of course! " chipped in Giltsoni. "But may I ask you a question?"

"Go ahead."

"What sphere of physics are you interested in?"

"The one which has a bearing on football," said Kron. "Mechanics."

"Quantum mechanics?" asked Giltsoni hopefully.

"Why quantum mechanics? No, Newtonian mechanics."

"Newtonian mechanics," echoed Alvar in a dejected voice.

"I study straight mechanics," Kron went on to explain, "the fundamental principles. That's what you should write in your article." He looked at Alvar and asked: "Have you heard of Newton?"

"He's trying to put me off the scent," Alvar thought to himself.

"You know what?" suggested Kron all of a sudden. "Let's go over to my quarters."

On the way Kron related how he, like all the other players, had had an encounter with Big X before he had flown out to this sports complex.

"Who's this Big X?" asked Giltsoni in an indifferent tone.

"You haven't heard of Big X?" asked Kron in surprise. "He knows everything about you."

"A walking encyclopaedia?"

“Big X is not a person but a machine,” explained Kron striding along as he spoke. “He stores in his memory information about each citizen. The President himself talks to Big X about almost everything that crops up. Well I too had a chance to converse with Big X. He asked questions and I gave the answers...”

“What did he ask you about?”

“Everything under the sun. He’s just about as curious as some old gossip. He probed me about the most trifling things. He wanted to know it all.”

“What did Big X want the information for?”

“They say he asks all these questions to determine what you’re capable of.”

“How did he assess you?”

Kron shrugged and said: “My trainers know that, not me. But here we are! ”

They had arrived at a modest room in the standard block provided for sportsmen’s accommodation.

Once inside Kron said: “Please sit down. I’ll be with you in a minute.”

No sooner had the door closed than Alvar rushed over to the book-shelves. There stood a thick volume that was clearly much thumbed. Mark Nusch! On the first page there was a dedication which read: “To Kron—for your eighteenth birthday from your friends in the team, wishing you health, happiness and plenty of goals! ”

Why had his friends decided to give Kron Mark Nusch’s book in particular? Would it not have been precisely because they knew about his

interest in physics? Alvar put the book back and picked up the next one: *Playing the Ball. A Review of Football Strategy and Tactics in the Twentieth Century*. This was a magnificent quarto edition with colour photographs. *Man or Robot?*, *The Robot's Faultless Strike*, *Can We Rely on Man's Striking Power?*—were among the captions.

Then Giltsoni found what he had been looking for: an imposing volume entitled *Principles of Analytical Mechanics*. He did not need telling twice that this was a detailed work of Newtonian mechanics. This book was just the soothing panacea his fevered mind needed at that moment. To judge by the worn edges of the pages Flinn was making a careful study of the contents. All was not lost...

As Alvar leafed through the pages, certain formulae came back to him as did a good deal of other material he had pored over in the past...

Just then Kron came in.

"I'm interested in how football stars spend their spare time," said Alvar as he put the book back on the shelf. "I like my articles to have some meat to them. D'you spend a lot of time on scientific research?"

"What d'you mean research? I told you before: mechanics is important for me because of its bearing on football."

"And only that?" asked Alvar, peering hard in Flinn's direction.

"Yes," confirmed Kron. "I've worked my way through a whole heap of literature on the game. I came to the conclusion that even those whom the press in their day held to be the

greatest footballers were no more than diletantes.”

“Interesting,” commented Giltsoni, forcing out the words. As he started to finger the packet of cigarettes in his pocket he asked: “Where does mechanics come in?”

“Wait a minute. To start with let me give you an example. In the film archives I came across some old reels about one of the world football championships held in England. My attention was caught by one of the teams’ centre forwards. His name was Eusebio. The papers ran out of superlatives writing about him. The Magician from Mozambique! The miracle of the football field! and so on and so forth in the same vein. I decided to make a detailed study of the miracle player, to analyse the mechanical components of his play so to speak. There was no getting away from it, the fellow did play well, very well indeed. Yet you would have been amazed to see how many crude mistakes he made on the field. He would sometimes start to run in quite the wrong direction. He would sometimes run out for the ball in too much of a hurry, or again sometimes not be quick enough off the mark. He sometimes misjudged his jumps and even missed a strike.”

“And as for goals?”

“You should have seen them. Eusebio turned out to be the leading scorer of that World Cup in London.”

“Winners are beyond criticism.”

“But he could have scored ten times *more* goals! ”

“If he’d made a study of mechanics?” queried

Giltsoni with a derisive laugh.

“Precisely,” went on Flinn quite unruffled. “It’s only people who know nothing of the game who look on it as something primitive. What is any game but a struggle between two or more forces which proceeds according to specific laws. Isn’t that so?”

Giltsoni nodded.

Kron went on: “Yet almost every human activity could be defined in the same terms: war, trade, love, the conquest of new planets. Even the scientific quest—isn’t that a sort of game as well?”

“If physics is a game, it’s a game without rules,” Alvar responded with difficulty. Young Kron Flinn had taken him unawares with his attempt to reduce everything on earth to a question of games.

“I don’t agree,” objected Kron. “Everything depends on what you mean by rules. The laws of physics can be seen as special rules for some sort of game on a universal scale.”

“Who are the players then?”

“That all depends on your point of view. You can take anything from the atoms to the stars.”

“That’s a cheap, over-simplified view of it,” muttered Giltsoni.

“Let’s turn back to football,” went on Kron, paying no attention to that deprecating remark. “If we freeze any one situation on the field, while there are a whole host of possibilities, there is always one optimum solution.”

“The optimisation problem,” went on Giltsoni mechanically.

“Precisely,” exclaimed Kron. “Imagine that at some moment the ball came to me. Should I keep possession or pass it to my team partner? Which direction should I pass it? How hard? Only with the help of analytical mechanics can all the answers be provided to those questions.”

“I have yet to see a footballer who turns to pencil and paper in the middle of a game and starts working out differential equations. After all you can’t put football in the same category as chess.”

“A footballer worth his salt must, to use a chess image, take in the board at a glance. His very strength lies in his ability to do so. And here a knowledge of mechanics is essential,” insisted Kron. “On the football field he is confronted with a complex dynamic situation involving twenty-two variables. Moreover each one of the players in his turn has a whole range of alternatives open to him. I have set myself the task to channel the efforts of each individual player within a single current. This problem is incredibly complicated from a mathematical point of view, but I’m going to get there. You can put that into your article.” By this time Kron’s eyes were afire.

Giltsoni had been biting his lip so hard that it was starting to bleed. Fate had cheated him yet again. Now there was only one chance left—Ligo Staven the acrobat.

* * *

Perhaps he was only chasing a mirage? And what if the task he had set himself had no solu-

tion after all? What if there was no system of equations with which to define the universe in all its diversity? If he had embarked on a wild-goose chase then it was no wonder that the candidates selected by Big X had proved so useless: the cunning machine preferred, it appeared, to come up with an incorrect solution to a problem than to remain silent and thus admit its powerlessness.

Perhaps sitting up there in the Crow's Nest all those years he had turned his back on happiness for nothing? Shella?.. Where was she now? Now that was information he could have asked Big X for to some purpose!

Alvar looked round the cabin of the ornithopter. Abor was sitting there calmly in front of the instrument panel, quite detached from the mutterings of his master and to everything else around him.

Shutting his eyes Alvar tried to remember all the details of that encounter in the town where junior clerk Anton Pulver had lived. The street, the shop-window, the woman looking at something in the window, standing with her back to him. Had it been Shella or hadn't it? Now there was no telling...

Happiness ... could it be defined after all? Perhaps the heavens above only dispensed it in miserly doses, and happiness never came on a large scale? Perhaps if portions of happiness were enlarged they might explode like quantities of uranium when they reach their crucial mass? Perhaps happiness can only be attained if shared with someone?

And to think that he had been planning to

make the whole human race happy! Giltsoni looked over towards the impassive figure of Abor Isav.

Of course that noble end justified any means, that he had decided for himself long since. Yet what if the goal were unattainable, like the end of the rainbow?

Alvar gave his head a vigorous shake as if to drive out that moment of weakness. No, Big X could not have been wrong every time. There was still one last chance—Ligo Staven.

This one had to be foolproof.

CHAPTER VIII

THE LAST STAKE

During the flight Alvar Giltsoni kept on thinking back to Big X's list again and again...

Lili Charlot, Anton Pulver, Kron Flinn... There was another candidate—he himself. He, Alvar Giltsoni, had believed himself capable of putting the finishing touches to the unified field theory. He had needed fifteen years of unrelenting slog before realising that he too was misplaced as a candidate for genius.

Was Menzies as bad a prophet as Big X? Surely not!

* * *

It turned out that Ligo Staven was not to be found at the spot listed by Big X. It required a good deal of effort on Alvar's part to discover that the young acrobat had left the town after quarrelling with the run-down local troupe, for some reason or other.

"Imagine it," protested the indignant circus-owner, who looked like a sorcerer with moustaches specially glued on for the occasion, "he called the other artists, his colleagues, a herd of seals. He said all they were capable of was entrusting everything to the robots. He took a few of his friends off with him and that was that."

"But Ligo himself, did he really have something to offer?" asked Giltsoni. So far his visit

had brought him no nearer his goal, the absent-minded old chap had not even had the sense to tell him in which direction the rejected Ligo Staven had turned his steps.

Alvar's question had him momentarily at a loss for words.

"To be honest..." the old man spoke hesitantly, as he searched for a reply. "Ligo had grounds for looking down on his colleagues."

"Why?"

"You see I've put on a good many performers in my time. I've seen all sorts. Some were better than others..."

"And Ligo?"

"He was special."

"A real master of his craft?" prompted Giltsoni.

The circus manager shook his head and went on: "It wasn't so much that. Ligo even made the odd slip sometimes, although, to be truthful, only very rarely. Yet a lion with shortcomings is still a lion and a mouse without shortcomings is a mouse and nothing more. D'you understand? Ligo was as different from other performers, as chalk from cheese."

"But the bird has flown."

"You see that wretched young fellow had perfect coordination," the manager went on. "He was still a rough diamond and not many people were aware of the gleaming jewel underneath. But sooner or later he'll stun everyone."

"Did Ligo Staven work at anything else besides acrobatics?" asked Giltsoni.

The old man answered curtly: "He was not one for the women."

“Did he read at all?”

“You’ve come to the wrong person,” said the circus-owner, his moustaches bristling. “Spying on my employees is not something I go in for.”

Giltsoni noticed that the old man’s hands were trembling. He hastened to pacify him and said: “I’m a reporter.” As he said it he patted the notepad he had taken out of his pocket. “I had heard about Ligo Staven and his story fascinated me. I think that given the flattering things you’ve been saying about him...”

“Just a boy! A mere puppy!” said the old man, almost choking from anger.

“Forgive me?” said Giltsoni taken quite unawares.

“I don’t mean you, but Ligo. He pays no heed whatever to the experience of his elders or their advice.” Beating his breast as he said it the circus-owner went on: “He had the audacity to declare to me that I knew not the first thing about either parallel bars or safety nets. Just imagine! And I’ve spent forty-five years in the circus...”

After that interview Giltsoni spoke to the other artists. One of them recalled that Ligo and his friends had been planning go on tour along the West coast with their own outfit, ready to risk the consequences.

Alvar decided to set off on his search for Ligo without wasting any more time. After a few fruitless stopovers he had happened to break his journey in one small town just by chance and then discovered a short article in a local paper containing a description of the performance that the travelling circus had put on the day before.

Giltsoni had made a detailed study of those dozen or so lines. At the end of the unsigned column was a sentence to the effect that the young acrobat Ligo Staven had made a favourable impression on the audience. It all reminded him of a game of hide-and-seek. He kept losing track of Staven and then finding the scent again. The acrobat kept eluding him, and Alvar had to content himself all the time with reports of his past performances.

Soon an interesting detail began to catch Giltsoni's attention. The tone of the references to Ligo Staven in the local press was becoming more and more enthusiastic. Within a short time almost the whole of the circus reviews would be devoted to Ligo Staven: there could only be short comments on other artists in the troupe, right at the end.

When he had almost lost hope of catching up with him, Giltsoni came across a poster in a small coastal resort—Arborville—informing the local residents that the acrobat Ligo Staven and his troupe would soon be in town. Alvar noticed that the poster referred to the acrobat as the “famous” Ligo Staven. In all the towns visited previously Staven had only given a single performance, but here four were scheduled.

“You know, we’re going to kidnap this acrobat,” Giltsoni announced to his henchman.

“Where are we going to take him?”

“To the Crow’s Nest.”

“And then...”

“Then you’ll get your million,” said Giltsoni, cutting him short. “For the time being here are your tseon cigarettes.”

Abor Isav quickly took the packet handed to him. It was full except for one cigarette, the one which Alvar—albeit to no effect—had used on Anton Pulver. After visiting the “junior clerk” he had carefully sealed it up again.

Abor turned the packet over in his hands, looking at it hungrily.

“Don’t do anything foolish now, Abor,” warned Alvar.

“Just one cigarette, Boss.”

“No.”

“One draw...”

“Tseon’ll be the death of you.”

Abor rubbed the back of his head: “It deadens the pain though.”

“Just you let *me* tell you, what’s good for you and what isn’t,” retorted Giltsoni abruptly. “After all it was me who put you back on your feet again, wasn’t it?”

“Yes, Boss,” admitted Abor with a sigh, putting the cigarettes away in his pocket. “The action’ll start over there,” said Giltsoni. “We must track down this young talent. The important thing is to make sure there are no witnesses. When I give the signal you’ll start smoking and then blow smoke straight into his face. Is that clear?”

“Sure.”

“And you’re not going to start inhaling.”

Abor nodded obediently.

Alvar insisted further: “Don’t do anything without instructions from me. When all’s said and done, I’ll be making sure you don’t anyway.”

They kept a close track of Ligo’s movements

for the next two days, but without results. Giltsoni could have almost howled with the frustration of this hunt. There were always people hanging round Ligo Staven, pressmen, spongers, admirers...

On the third day Alvar's luck took a turn for the better. Ligo liked to take a walk before a performance, but someone always used to be with him. This time the acrobat managed to slip out of the hotel on his own. The streets of this provincial town were far from crowded. Staven wrapped his raincoat closely round him and wandered slowly down the hillside. He had realised that it went down to the river.

* * *

Ligo opened his eyes. His head was burning. He was in a cramped room full of all sorts of junk. Nearby were two strangers, the men who had sat down next to him in the park.

"Where am I?" Ligo asked in a faint voice.

"With friends," answered Giltsoni. "If you're sensible, nothing'll happen to you."

"Let me out of here," said Ligo and tried to get up.

"Take it easy, young man," warned Giltsoni.

Abor did not say anything, just clenched his jaw and flexed his shoulders like a boxer making ready to go out into the ring.

Ligo groaned: "What d'you want from me?"

"I just want you to answer some questions, without holding anything back," said Giltsoni.

"I've got a performance this evening!"

"I'm afraid it won't be taking place."

"You've got no right to hold me here! "

"Quite right, young fellow," said Alvar giving his prisoner a pensive look.

Choosing his moment carefully Ligo jumped to his feet. Abor tried to seize hold of him but missed. The acrobat took a step towards the sloping wall ... and froze in his tracks. What he had taken for a sky-light turned out to be an aircraft window. Behind the sheet of dusty plastic he could see quickly moving shadows. On closer examination it was clear that they were really clouds.

A burst of laughter brought Ligo back to his senses. He turned round. Giltsoni was laughing heartily away, as if someone had just told him the latest joke.

"Let you out?" said Giltsoni, no longer laughing now. "Perhaps you know how to fly?"

Abor flapped his arms up and down like wings, in a rather foolish fashion.

"Where are you taking me to?" whispered Ligo.

"To the Rockies," announced Alvar.

"But that's miles away! "

"It's not exactly near."

"But what d'you want to go there for?"

"I've told you already—down in the park. We need to have a long talk with you," said Giltsoni.

"What's wrong with Arborville?"

"We could have talked there," agreed Alvar, "but so far you've not been behaving in a very obliging fashion. You tried to run off and all that. So we've decided to take you further away

so as to have the chance to talk to you somewhere quieter. It'll be comfortable up there in the Rockies. Won't it, Abor?"

"They're mad," concluded Ligo. He decided he had no alternative but to play out the game they had started.

"And when we've had our ... talk, will you let me go?" persevered Ligo.

"That'll depend on you," replied Giltsoni. "Help me work out the space-time tensor and you'll be free to go. To the ends of the earth for all I care. Then you can go back to your high jumps—it's up to you."

Staven looked warily at Alvar. The ornithopter had long since retracted its wings and was now streaking through the atmosphere like a relentless torpedo. The sky outside was coming over dark, first purple and then completely black.

EPILOGUE

The clocks on the space-link tower struck ten.

There is no holding time. It flows on, seeping through every tiny cell of discrete space, like a tiny stream of sand in an hour-glass. Newton used to hold that there was no connection between space and time, but he was wrong.

Relentless dialectics links together in a single chain everything from neutrino to the stars. Where was it that he had read that sentence? Perhaps in something by Mark Nusch? The old man wiped his forehead, but his memory did not lend him a helping hand.

Everything in Nature merges in a unified field. Yet its equation had still to be found. Any particle is a mirror of that unified field, as it were; we ourselves are no more than conglomerations of particles. Armed with a knowledge of the laws of that field man could become master of space and time.

It is surely an ironic blow of Fate to make a man contemplate Time, when he has only a small share of it left to him. The old man leant over onto his calculator, his face twisted in a wry smile.

There had been a time when physicists had thought their knowledge of the world complete. Newton's equations had been regarded as universal. Had they not served to define the movement of any body under the impact of any force? Given knowledge of the initial impulse behind a stone thrown towards the horizon at an angle it had been possible to plot its path using

Newton's formulae. Given knowledge of a planet's position at a specific instant in time it had also been possible using his formulae to determine where it would be at another specified moment in time.

Physicists had indeed held that the whole world must consist of particles and indeed only particles. They had considered that there could not be anything in the universe besides atoms. If so, then definition of the world and its properties would have been all too easy. The world would hold no riddles.

It was Laplace who had expressed that idea in the most vivid terms. Give me the basic data for each of the particles making up the universe, he had said, and I shall tell you what the world will be like at any subsequent moment in time. That had been the heyday of determinism, when the faith of scientists in the equations of Newtonian mechanics as a means of describing the natural world had been limitless.

Some time later however it had emerged that the world was not as simple as once hoped. It turned out that Newtonian laws were of limited application. They could not be used in relation to either very small particles or great speeds comparable with the speed of light.

Small sections of space appeared to be subject to their own laws that had little in common with Newton's.

An electron is a particle but at the same time a wave. It is both situated at a particular point in space and yet cannot be pinpointed at a given position. This is by no means the result of the shortcomings or "primitive" nature of our

scientific instruments, unable though they are to define the exact location of an electron. Such is the nature of things: in the microworld there reigns the indeterminate principle which “prohibits” the really small particles from fitting Newtonian equations.

The hope that Newtonian mechanics were universally applicable and that its equations were true “world equations” had died. It had died never to be born again.

Einstein put forward broader equations that incorporated Newtonian mechanics as one specific element. Yet not even Einstein’s equations could embrace all the world’s diversity...

The old man lost in thought looked down at the table piled high with papers covered in his notes and jottings. This work served to take his mind off other things and lulled him into a state of calmness: its effect upon him could be compared with the tseon “dream smokes”.

When he heard the clock strike he got up, walked into the kitchen and opened the refrigerator. There was little food left but he had no wish to go into town: he would be pestered by layabouts outside in the street.

The old man went back to the table and started to look through the jottings that he had made during his last sleepless night. He knew that he was no longer in touch with the latest advances of international science. His years of voluntary exile up in the Crow’s Nest had taken their toll.

What real contribution had he made to physics? A few articles on the unified field theory published when he had been still at

university? Yet how naive, shallow and confused did those ideas look today. They belonged to another era altogether.

He absent-mindedly moved a page of print—out from one hand to another and his thoughts strayed to Abor Isav. He wondered where he was now. Abor had taken off, seizing the moment when Giltsoni forgot to change the battery in the special transmitter and the intensity of the radio signals sank to zero. After Abor had left, Giltsoni let things slide once and for all and began to lose count of the days. He was not really that old, but looked like a regular grandfather. The beard was largely responsible for that: he had grown it again, just as he had up in the Crow's Nest. The white in it made Alvar look like an Old Testament prophet.

He found the sight of other people intolerable nowadays. He felt cruelly let down by the human race in general, now that it had turned out that not even its finest representatives, specially chosen by Big X, were able to provide the clue to the world equation. Surely after that Giltsoni could not help but despise his fellow men. The other people in the town repaid him in kind.

His disappointment over the last candidate for genius had made Alvar lose his bearings entirely. The acrobat Ligo Staven, who had been carried off to the Crow's Nest with the greatest difficulty, had proved just as much of a non-starter at physics as all the others who had come before him in Big X's list. So Giltsoni's last gamble had led nowhere.

As he rearranged the papers on his desk Alvar

came across the biotransmitter and threw it to one side in irritation.

In the twilight the space-link tower was lit up faintly in the last rays of the sun which slanted past his window. Colour from the sunset flushed the low hurrying clouds and they seemed to smoulder like the embers of a fire given a last breath of life by a gust of wind.

Giltsoni stood with his arms folded across his chest, looking out of the window; he was motionless like a statue and for a moment seemed to resemble Abor Isav. In fact he had taken on many of his ways and gestures without realising it. He had been infected by Abor's indifference to everything around him and like him submitted unconsciously to commands from a higher authority—Alvar's obsessive desire to complete the unified field theory, to work out once and for all the **WORLD EQUATION**.

Giltsoni was still working with the same single-minded dedication, working out formulae at night and then checking through all he had written down the next morning. He was not to know that the bulging file with his "completed findings" stored conclusions in which any first-year university student would have unearthed dozens of crude errors.

That night he had once again been unable to sleep for hours and had then been disturbed by alarming dreams as dawn was breaking. Perhaps in just a few more days he would complete the world equation after all. It was difficult to work here in an atmosphere of hostility from all around him. How good it would be to get back to the Rockies! Yet the manipulator-robots

had blown up completely destroying the Crow's Nest. The dome was no more. The three of them—Alvar, Abor and Ligo Staven—had only escaped by the skin of their teeth.

It had been a strike of luck that the explosion had taken place in the day-time. Thanks to the alarm signal they had managed to jump out of the dome and hide behind the rocks. Alvar had brought out with him the most precious thing he possessed—his papers. Then they had made their way along icy ridges and down rocky slopes, finding their way by the stars. It was as if the centuries' old civilisation had been stripped from the face of the planet and they had been changed back into primitive savages with nothing else to rely on but their own brute strength.

It goes without saying that the kidnapping of the acrobat had been a futile exercise; Ligo had almost collapsed during the journey. At one stage they had encountered a storm. Half dead with fatigue they crept into a small cave and huddled together in an effort to keep warm. Abor felt better than the others because he was insensitive to cold and could cope better with privations, yet towards the end even he began to weaken.

How invaluable the trusty ornithopter would have been then! But it too had gone up in flames in the explosion.

Giltsoni would not have hesitated to abandon his companions and risk getting down to the valley on his own, but he had realised that his chances of survival were better if he remained with them. He had woken at dawn to find the

storm had subsided. There was a layer of frost on his clothes despite the thermal fabric. Snow had drifted across the entrance to the cave and the dim light made its way in through a small gap at the top.

Abor woke next. He walked over to Ligo and started to shake him awake. It took some time before the acrobat opened his eyes. However he was so weak that he could not rise to his feet.

"It's time to be off, genius," said Giltsoni.

"Ligo can't walk," announced Abor as he knelt before Staven.

Giltsoni shrugged his shoulders and said: "That's his problem."

For a time he watched Abor's unsuccessful attempts to rouse Ligo and then instructed him to clear away enough snow for them to be able to get out. Abor hesitated and Alvar put his hand into his pocket to give the transmitter a gentle press. Then Abor left Ligo and slowly moved over toward the entrance. He took a short run at the drift, then head bent forward he hurled himself straight at the wall of snow. Within minutes the cave door had been cleared.

Giltsoni was the first to leave the cave. He walked on without so much as looking back. Abor killed time for a little while, but waited in vain for his master's next command. The figure of the boss gradually receded into the distance. Abor groaned with despair—he had almost forgotten how to take an independent decision. Giltsoni had deliberately refrained from using the transmitter: he wanted Abor to abandon Ligo to his fate in the cave of his own free will.

When he had gone about a hundred yards Al-

var turned round to see Abor almost bent double under Ligo's weight as he carried him out of the cave with steady steps, although swaying from side to side somewhat.

Alvar's first urge had been to use the transmitter and thus force Abor to fall down into the snow and cringe with pain. Yet something, some unfamiliar feeling, stayed his hand. He waited silently for Abor to catch up with him and then they all pressed forward together. They made slow progress soon losing track of the days along with any hope of being rescued. In the end they were noticed by a passing plane that happened to be flying over the Rockies. Giltsoni was not frightened that Ligo Staven would cause him any trouble once they got back to their ordinary day-to-day lives. The unfortunate acrobat was clearly having trouble with his memory after his dose of tseon. Ligo made no reference either to the kidnapping, nor to Alvar's strange interrogations aimed at wringing the world equation out of him.

Ligo only had one dream: that was to get back to the Big Top. This wish was so strong that even tseon did not undermine it.

The shadows in the room grew thicker. Alvar moved away from the window, sat down at the table and took out a fresh sheet of paper. He could not let himself have too long a break. However his overtaxed brain refused to obey him and work. He went out into the street: sultry heat seemed to close in on him.

He heard a shout: "Here comes the Egg-head! "

Giltsoni quickened his step but it was too

late. From out of nowhere the boys came running but a minute before the dark street had seemed deserted.

“Egg-head! Egg-head! ”

A well-aimed stone hit him hard in the shoulder and another knocked his hat over one eye. Alvar began to run. Eventually the noisy gang was left behind by its prey.

On the way back when he had bought food, Giltsoni turned into a nearby square, a luxury he did not often permit himself. He sat down on a bench, putting his shopping on the ground beside him. If Abor had been there he would have helped him carry it all...

Blurred memories started crowding into his mind. His memory was letting him down nowadays. The facts were all slipping away from him like water through a sieve. Suddenly he recalled how he had worked on Abor's case in Menzies' clinic, secretly creating for himself a pliable assistant. Now that had been a plan worth having...

Memories...

When he arrived home Giltsoni decided to put his papers in order. He started with the pile tied round with red string. That was the legacy of his university days. Slowly he looked through the pages that time had already yellowed. Those endless talks with Mark Nusch... Giltsoni picked out a page at random.

“Man is the point where two infinities join: the past and the future”—the mere sight of those words reminded him of Nusch's voice.

“In that case a man's death fractures the course of time,” had objected Alvar.

“You’re confusing two things,” said Nusch, “subjective and objective time. Or perhaps time doesn’t even exist at all.”

“Where did that idea of time come from?”

“Man thought it up.”

“Why?”

“To make sense of the impressions he receives from the outside world...”

Giltsoni moved the papers over to the edge of his desk. Then came Shella’s letters. No, he would not read those. It would hurt too much...

In the fattest file of all Giltsoni used to collect and store material connected with his “old friends”, the candidates selected by Big X. For the most part it contained newspaper cuttings, but also the occasional poster. The popularity of the four grew and grew. One might even have thought that the newspapers were prompted all along by Big X...

Initially Alvar had stuck all the cuttings connected with the four names in a special album with dated pages. Later when there were more than he could cope with he just picked out the most interesting.

“No machine could compete with Lili Charlot,” wrote one journalist under the illusion that this would be the supreme accolade. “No machine could calculate every movement and every gesture with as much precision as the divine Lili Charlot. She is perfection itself.”

Kron Flinn in the meantime had become the idol of every schoolboy. No day went past without some mention of him in the papers. Then a book dedicated to the famous footballer was published. Giltsoni opened it near the mid-

dle where he had underlined in pencil a particular passage which he now read again: "The era of the proto-robot in sport is over. People have once more taken over the green pitches, rings, gymnastic apparatus and cinder-tracks. The fighting spirit, will to win, and inexhaustible ability to improvise have triumphed over the cold calculations and soulless precision of artefacts. The man primarily responsible for the resurgence of football as the spectator sport of the masses is Kron Flinn."

A similarly rapturous tone characterised the articles about the star of the Big Top, Ligo Staven. It was only Anton Pulver who scarcely came in for a mention.

As he looked through these papers Giltsoni started pondering once more over the puzzling selection made by Big X. There was undoubtedly some hidden meaning behind the choices made by the electronic giant since each of his candidates was now at the top in his field. Yet where was the connection with physics and the world equation?

* * *

The years went by in a monotonous succession, reminiscent of the time he had spent in the Rockies. Giltsoni was as white as snow. He could not even focus the gaze of his pale old eyes on one point for long at a stretch. For hours as he sat in his room his eyes would wonder round the walls, over the pages of a book, or the figures of a formula without him being able

to focus them properly. He left his sanctuary less and less frequently, preferring even to go hungry than to venture out into the street.

His hopes of completing the unified field theory had long since deserted him. His calculator was covered in a thick layer of dust, his fingers had not touched its keys for months. All he was doing nowadays was collecting newspaper articles about his protégés—that was how he now used to think of Big X's chosen four. Each one of them now a national figure, with the exception of Anton Pulver. His memory must evidently have suffered as a result of the tseon. And after all, what was Pulver without his phenomenal memory?

So Big X had really been right after all in picking them out in particular...

From time to time Giltsoni would make entries in his diary, recording odd memories and even brief accounts of events that from time to time brought colour into his monotonous existence.

His life was finished, he thought, as he leafed through the pages. Whose hands might this chronicle of passionate hopes and mistaken illusions fall into? Who would leaf through the pages filled with his tiny regular writing, and would they find any kind of logic in them? Or perhaps after casting a hazy glance over them the stranger would just shut the book unread thinking that the heartless man had sacrificed everything to one unattainable dream. He had spared no one—neither himself, nor other people. But to hell with it. Are all those theories really worth the sweat and tears, worth ruining a man's life for? .

Alvar could not stop himself from crying out in despair: "If I did go wrong, it was at least in all sincerity. And after all, doesn't sincerity in a man's mistakes absolve him of half the guilt?"

However there was still one last shock in store for Alvar Giltsoni.

When the Crow's Nest had gone up in smoke Alvar had managed to rescue from the flames the things that were most precious to him—his papers and notes. Notebooks and computer print-outs were still piled high in an impressive mountain beside his desk. Many times Alvar had resolved to sort out the mountain but each time he had stopped halfway deterred by the sheer size of the task.

At last though he plucked up enough courage and began working down from the top of the pile. He wondered to himself what had made him collect up that load from his hide-out in the Rockies, ready to die rather than leave it all behind? Alvar could have forced Abor Isav to carry it all, but then Ligo Staven would have perished, so he had refrained. An unfamiliar object caught Giltsoni's eye. He turned over in his hands a long six-sided capsule like some giant pencil. Oh yes, that was the biomemory unit, one of the devices invented during his fifteen years' "exile".

What was recorded in it? Not that it was of much interest to him. He was about to throw it into the wastepaper basket when something held him back. He pressed the playback button.

"...People are grey shadows. At times, when the pain strikes, they seem all alike to me and I can't distinguish between them."

The voice was so familiar it was almost frightening, yet however loud he turned up the volume Alvar failed to recognise it.

"I can't even tell whether I'm asleep or dreaming," the voice went on. "Dreams and reality are so interwoven that it makes me feel quite desperate sometimes. Perhaps that is each man's destiny sooner or later. I shall have to ask the Boss—he knows everything. But I can't bring myself to..."

"Ask the Boss!" But of course it was Abor, recording his thoughts.

"These last few days I've noticed that the Boss had been out of sorts again," Abor's deadpan voice went on. "These moods always coincide with my worst patches. Perhaps there's some link between the two."

Giltsoni mused to himself that Abor was cleverer than he had taken him for.

"What is it that binds me to the Boss?" Abor asked himself. "Why do I carry out his commands? I do it voluntarily—he can't force me. Why do I obey Alvar? Perhaps out of respect? No, I find Giltsoni unpleasant even though he saved my life. There's something off-putting about him. He cares about nothing but his work and that's beyond me. I think he'd even be prepared to kill somebody to finish it..."

In a wave of hate Giltsoni brought his fist crashing down on the desk, so hard that it even started to bleed.

"Yes, I don't like Alvar," Abor's voice droned on, "but I can't explain why. Choosing words is the thing I find hardest of all. 'You're an utter nonentity, because you can't even think for

yourself,' he once said to me. He's right, I don't know how. Nor can most other people, as far as I can see, yet they manage to cover up that weakness."

"He's got a point there," muttered Giltsoni.

"There's no sense behind people's actions. I used to think there was but that it was simply beyond my grasp. Now I see I was wrong. If you take the Boss for instance sitting there in front of me in the ornithopter..." Abor's voice suddenly broke off and all that followed was a crackling whir.

Alvar took a closer look at the capsule and saw that it was slightly damaged in one place. Probably it had got damaged up in the Rockies. There was a barely perceptible crack running across one of its sides. That had cut off the flow of Abor Isav's interesting observations in mid-stream. Alvar pressed the play-back button again and turned the volume right up, for in the recent years his hearing had started to deteriorate.

"The raft was rocking on the water and the tongues of flame from the torches were flickering," boomed away Abor's voice. "I got out of the boat. The party was in full swing. I have no idea what forced me to cross Dead Whale Bay that night and go out to the raft.

"I caught sight of the Boss at once. He was sitting over to one side on a log like those which formed the base of the raft. A girl was sitting next to him, more beautiful than anything I'd ever seen before! When I went up to them, pushing my way through the dancers, she raised her eyes and as they met mine I realised we were made for each other!

“The flickering light from the torches fell on her face. She held out her hand to greet me. I don’t think the Boss liked the way we exchanged looks...”

Old Giltsoni covered his face in his hands: the memory of that distant graduation-ball came back to him, together with its mood of youthful exuberance, high hopes and the image of Shella, Shella...

His mind wandered from Abor’s words for a moment until he was brought up with a start by the sentence: “I can’t forget the visit to Big X.”

Giltsoni’s heart missed a beat and he now listened, all ears.

“The Boss is feeling really bitter... It’s one ridiculous idea after another,” Abor’s voice rolled on. “Yesterday he ordered me to penetrate Big X’s defences no less, just by the way! He’s got a task to set him! ...”

“Come on! Out with it! A few more details, Abor! ” called Alvar as if Abor was within ear-shot.

“I know that I’m risking my life, but I can’t go against the Boss’ wishes. An unknown force was driving me on, just as it had at other all-important moments, guiding my every action.

“On my way through Big X’s security zone I had to crack various logical problems designed to weed out mere robots, and I made short work of them. I can’t remember how, but by then I was also dressed in the uniform sported by all Big X’s programmers. From the remarks passing between them I realised that the control panel was in the central core.”

“Hurry, hurry, Abor,” urged Giltsoni, but Abor was not to be hurried.

“The entrance to the central core was guarded by proto-robots armed with machine-guns. I’d come across those creatures before. They were first brought out when the Boss was living up in the Crow’s Nest. I decided this was yet another check, but the sight of me did not arouse the slightest suspicion. Indeed I’d noticed that the proto-robots seemed friendly towards me while other people did not really seem to their liking.

“The central core went deep underground. I thought to myself, ‘If things get tight I’m not going to get out of here,’ and a wave of fear came over me.

“At the bottom of the central core I came out into a large hall containing the control panel. There was a cluster of busy operators and programmers round it, exchanging only the briefest of remarks as they worked. Manipulator-robots laden with memory blocks marched round in a business-like way, like those who had put up the dome lab for the Boss at the Crow’s Nest.”

“They were produced by the same firm,” remembered Giltsoni.

“Three walls of the room consisted of nothing but countless data cells. I knew that each one contained information on a particular individual and thought to myself: one is devoted to the Boss, another to me and somewhere one to Shella. How nice it would have been if those last two had been next to each other...”

“Sentimental oaf,” hissed Giltsoni as he listened.

“Even an ignorant outsider could have seen that each second Big X was devouring a fantastic quantity of information of all possible kinds that was being brought in from every corner of the republic.

“I walked over to the control panel and sat down on an empty chair. At that moment what I feared most happened: the pain at the back of my head started up again. It was one of those attacks that the Boss knew all about.”

“God knows, Abor, they weren’t my fault,” mumbled the old scientist leaning forward over the biomemory capsule. “When you were inside Big X’s centre I didn’t touch the biotransmitter once.”

“The Boss had promised to rid me of those awful attacks once he’d finished that work I couldn’t make head or tail of and the money started to come in,” Abor recalled. “However at that moment I had forgotten all about Alvar’s promises, red and mauve circles were spinning before my eyes. So as not to fall over I leant my head against the panel in front of me. It felt as if a red-hot needle was boring into the back of my head. I clutched at the one thought—I mustn’t lose consciousness.”

Giltsoni started at the sound of a loud knock on the door. It was followed by the announcement—“Mail”—from a proto-robot with the customary plastic smile.

Alvar had long since grown used to these versatile machines always on the go, although when he first came down from the Crow’s Nest he viewed them warily.

“Thank you,” he said taking the thick packet,

and then he put it down in the corner without reading it. The jerky steps of the proto-robot could be heard clumping down the stairs, and then all was quiet again.

Giltsoni subscribed to many newspapers from all parts of the country so as to keep up with the latest news about Charlot, Pulver, Staven and Flinn, who had once been so important to him. On any other occasion he would have undone the packet at once, cut out the articles of interest, sorted them and then stuck them in the album...

But today he was far too eager to get back to Abor's recorded thoughts.

"...They were both in close-fitting uniforms, like all the rest," Abor went on. Alvar had missed the beginning of the sentence when the postman had interrupted.

" 'Are you all right?' one of them asked. I noticed her face was a little like Shella's. I must have turned horribly pale. The Boss says I go quite ashen when an attack comes on. I was afraid to open my mouth, for fear I might let out a scream.

" 'It's another new bloke,' said the first girl to her companion.

" 'Yes, none of them stay long,' went on the other, looking at me closely. 'Is it your heart?' asked the first one. I tried to smile as confidently as I could manage: 'It's nothing, everything's all right.' After that the two girls went off.

"Carefully trying not to move my neck in the process I tottered forward. I was inside the enormous horse-shoe of Big X's control panel. It was as if two arms were stretched out ready to clamp round intruders.

“An elderly man came up to me, breathing heavily like a typical asthmatic. His uniform was wrinkled because it didn’t fit properly.

“ ‘Good morning, colleague,’ he said.

“Losing my grip for a moment I nodded and then almost shouted out with pain.

“ ‘Are you on a mission from the President?’ asked the stranger.

“ ‘Yes,’ I said at random. What I wanted more than anything else was to be left alone.

“On both sides of me people were hurrying up to take their seats at the control panel, whispering instructions into Big X’s input membrane, then collecting their answers and hurrying off again. Once a seat became vacant someone else would sit down.

“ ‘Are you on a selection job?’ asked the elderly man.

“ ‘Yes...’ I muttered taken aback by how near he had come to the truth.

“ ‘We must be working on one and the same project,’ he remarked as he sat down on a recently vacated chair.

“ ‘I wouldn’t know...’

“ ‘I’ve got to find people, free of any physical defect.’

“ ‘For colonising Venus?’

“ ‘No, this is a completely new departure,’ said the stranger, shaking his head. ‘My job’s called Project Sport Revival. And yours?..’

“At that moment the loudspeaker came to the rescue booming out: ‘No delays at the panel! No delays at the panel!’ At that the stranger turned away and quickly whispered into input membrane his instructions.

"I leant forward as I had seen the other programmers do and spoke clearly into the membrane: 'Project *Genius Hunt*: search out among all living men the one who has (or will in time) achieve the most complete mastery of...' I struggled to remember the end of the sentence that the Boss had dinned into me, but the pain in my head muddled my thoughts and I just couldn't..."

"Imbecile! " yelled Giltsoni burying his head in his hands. Now thanks to this chance discovery, everything had fallen into place. Big X had not been to blame at all. He had carried out the task set and selected the men and women who would achieve supreme perfection in their profession. Each in his or her special field, but physics had not come into it since Abor had not even mentioned it... Wait a moment though! Why had Big X included him, Alvar Giltsoni, in the list?... So it meant that he did count for something after all? Why then had he not achieved anything? Why had his potential not been realised?

Meanwhile the meticulous reproduction of the biomemory's recording went on... "I don't remember how I left Big X," Abor confessed. "I was already in the underground station when I took the print-out from my pocket and read the list Big X had provided..."

Clenching his teeth Alvar listened to the list, every letter of which was all too familiar to him. There were no more riddles.

Abor was still droning on. Giltsoni brought his fist down with a crash that shattered the biomemory capsule and the voice was cut off.

The recording of his loyal assistant's voice was destroyed forever.

"Egg-head! " Giltsoni recalled the name that the merciless little boys had jeered after him in the street. So it would seem there had been some reason why Big X had included his name on the list. After all Mark Nusch and Menzies had predicted he would have a brilliant future...

When was it that he had squandered his talent? Perhaps at precisely the moment when he had decided to fly up into the Rockies and cut himself off from his fellow men, in keeping with Menzies' ridiculous advice?

Not that it made any difference now... Giltsoni paced up and down his room all that night. He was thinking back over his past life which he had sacrificed to the one idea which obsessed him.

When the first rays of dawn could be seen outside, Alvar stopped finally exhausted and all of a sudden noticed the thick packet thrown down into the corner the previous morning.

"Yesterday's post," he thought to himself and kneeling down on the floor he started sorting through the newspapers. There were numerous references to the persons picked out by Big X in accordance with Abor's instructions.

"You'd think there was nothing else to write about," grumbled Giltsoni leafing through newspaper after newspaper.

It would seem that there would be always some irresistible force driving men on to achieve perfection. Perhaps that explained the popularity of the motto: *Per ardua ad astram*.

Giltsoni took a few paces forward. The walls

of the room shook and started to spin around. Something was happening to him. Perhaps it was the oppressive heat before a storm. He remembered the room crammed with books and memory blocks, the inspired face of Anton Pulver who had triumphed over the mechanical calculator. And then... Something horrible happened... And it was he, Alvar Giltsoni, who was to blame.

Perhaps it had all been a bad dream? A nightmare he had once had. If only... Alvar looked round and wondered whether his life now was the dream instead...

In surprise he suddenly looked down at the cut on his hand and touched the dried blood with his finger. It smarted, but was pain really a sign that he was awake? One could feel pain in a dream as well. Yes, pain could even invade dreams if the memories were bitter and insistent enough...

* * *

The sun that was now pouring into the room shed its light on an old man sitting at his desk, his head slumped on a pile of papers. His silvery beard was flapping gently in the breeze.

The bent figure was motionless, like a macabre statue. Even its shadow seemed dead, so lifeless that a sparrow which had flown in through the open window started hopping about the desk, chirping and pecking at the papers with its beak.

THE VIOLET



THE VIOLET

THE VIOLET



“And what if all this is just some kind of hoax?” asked Arno Kamp looking down at the flower with an incredulous expression on his face. Although it was somewhat squashed from lying in the tight packet, the flower nevertheless appeared perfectly fresh, as if it had just been picked.

“It doesn’t look like it,” answered the man sitting the other side of the table.

“It looks too innocent,” said Arno Kamp after a pause.

“I agree. It does really look innocent. But there’s something else in with it.”

“Yes, that’s the whole trouble,” said the police chief with a sigh, and picking up the few pages torn from a notebook, he began to read them in a quiet but nevertheless expressive voice: “ ‘Hugo Lenz! You have the misfortune to be working on something most dangerous. It would be all right if only you were in danger—then your scientific pursuits could be seen as your own private affair. But you are trying to penetrate the ultimate secrets of matter, secrets which should be left well alone, just like the sacred relic on an altar which, if touched, is defiled. Nature is tolerant but there are limits. If these are overstepped, then she will wreak vengeance. I know you are in charge of the largest scientific centre in the country, a Nobel Prize winner and have a whole string of academic titles and degrees...’ ”

“As you see the author of this letter knows a good deal about you,” interrupted the police chief.

"There's nothing secret about that information," said Lenz with a shrug.

"More than likely, but let's get back to the letter. 'Surely you, Hugo Lenz, cannot seriously assume that all those scientific honours make you infallible? I know that you are given special security cover round the clock and that not even a breeze could find its way through into the premises of the Nuclear Centre. Most likely, it's that which makes you quite convinced that you are invulnerable.' "

The police chief looked up from the page he was reading, and asked: "Tell me, have you some friends, perhaps, who like practical jokes and things in that line?"

"No," said Lenz with a shake of his head.

"That's not the letter of any ordinary fellow, as you've just seen—it's a regular thesis on Good and Evil." The police chief brandished aloft the thin bunch of pages.

"At least the author doesn't try and hide his real ideas."

"D'you think there's anyone from among your close acquaintances who could have written that letter?" asked Arno Kamp.

Lenz said nothing and looked down at his hands.

"Perhaps you suspect someone?" the police chief went on. "We all have enemies, or at least people who envy us. There are only two of us here and I promise you that not a single word you say now will go beyond these four walls. Think hard, there's no fire."

"Unfortunately, I can't name anyone," said

the physicist in a firm voice, looking Kamp right in the eye.

"No one?"

"No one at all."

"A pity. When did the packet arrive?"

"Today in the morning post."

"I hope you haven't talked about the contents to other people."

"I told my colleagues about it."

"A pity."

"What's wrong with that?"

"It could lead to tongues wagging in the wrong places."

"As I see it, the more people know about the threat the better."

"Be so good as to let me decide what's better and worse in this situation," broke in the police chief in a curt voice. "You don't mean to say, you simply passed the letter round?"

"No, I told them what it said."

"You gave them a resumé?"

"No, I told them word for word."

"What d'you mean?" asked the police chief with renewed interest. "You don't mean to say you managed to learn the letter by heart in that time?"

"You see, I've got a ridiculous memory. All I need to do is to read through a text once or twice and then I've memorized it."

"For long?"

"For good."

"Amazing," remarked the chief, noting something down as he bent over his desk once more. "But, after all, a good memory's essential for a scientist."

No one spoke for a while after that, and they stood listening to the incessant whir of the city outside, which even the double bullet-proof glass could not keep out.

"D'you think it could have been written by a madman or some kind of fanatic?" asked the police chief.

"A fanatic possibly, but no way could it be a madman," Hugo Lenz said. "His reasoning is too logical. If you take the passage..." Lenz then rose and bent over the table to pick up the pile of pages in front of the police chief.

"Just a moment," said the chief, covering the pages with the palm of his hand. "Seeing you remember it all by heart...."

"I understand," replied Lenz with a smile.

"Forgive me..."

"You'd better follow in the text," Lenz went on, interrupting him. Then, looking up at the ceiling, he began in measured tones, but without faltering, to reproduce the letter as if the lines had appeared, visible to him alone, on the snow-white plastic overhead. "Yes, everything in Nature has its limits. For want of another term, I might refer to them as the 'durability threshold'. If we overstep that threshold, then the whole edifice collapses, the plane crashes, the ship sinks to the bottom, the atomic nucleus bursts like some mini-sun... You, Lenz, claim to be going beyond the 'durability threshold' of the world in which we live. You are bombarding quarks—the very bricks of which the Universe is made—with particles of cosmic energy.

"If you achieve your aim, the world is not worth a farthing. The chain reaction might well

turn into a reaction that breaks loose from the chain. Then the world will disintegrate.

“Indeed, who gave *you*, Hugo Lenz, the right to undertake such experiments? Admittedly, you have the blessing of the President himself. But the point at issue here is the moral right to engage in work that might bring the whole of mankind to the brink of annihilation. I shall wrest this right and opportunity from you...”

“Quite correct,” commented the police chief when Lenz stopped to take breath.

“Do you think that the author of the letter is right?” asked Lenz hastily.

“What I mean is that you’ve kept exactly to the text,” explained the chief.

Lenz leant back in his chair and said: “If we accept that my experiments are indeed dangerous...” Then he shut his eyes for a moment appearing really worn out as he did so.

“Dangerous?” inquired Kamp, to make sure he had heard correctly.

“One could assume that they threaten to destroy matter, to turn it to dust. But what right has the author of that letter to tell me what to do? Who authorised him to be the champion of humankind? Does he really think he’s God, holding the fate of the world in his hands? Or a prophet, who can see into the future? Most probably, the work I am doing on splitting quarks, those bricks of the Universe, constitutes a vital, indispensable part of the natural process of evolution.”

“I don’t quite follow your line of thought.”

“What I want to say is: splitting quarks is perhaps a stage that every civilisation will have

to go through in the course of its evolution," Lenz explained. "But has the author of the letter given any thought to that?"

The physicist appeared to have forgotten about the police chief. He was debating the subject with an unseen opponent, arguing, proving his points, trying to persuade him. Bringing up a neat counter-argument in his defence, he tugged at his little beard with a triumphant air, and after a serious objection on the part of his "opponent" he lost heart and started to crack his knuckles and rub the bridge of his nose.

"You're getting too worked up," said the police chief, when Lenz stopped for a moment, groping in his mind after an objection to another argument put forward by the author of the anonymous letter. "What's the point of arguing with a shadow? When we get hold of the man behind this missive, then it'll be quite different."

"Get hold of him?"

"I hope we shall."

Hugo Lenz rose, casually straightening his suit jacket, before saying, "But I don't think he left any clues behind him, did he?"

"Things don't work like that, my dear Mr. Lenz. One of your famous fellow-scientists once said that for every action there is an equal and opposite reaction."

"Newton's third law," responded Hugo Lenz quite automatically.

"I would formulate the first and fundamental law of criminalistics in the same way," said Kamp, getting up from behind the table. "Every action--and I mean here criminal action--leaves

a trace. Our task is to hunt out this trace, however small and inconspicuous it might seem."

"I should like to know where you are going to look for it?" the physicist broke in.

"Everyone has his professional secrets," said Arno Kamp, looking hard at the physicist. "You have yours and we have ours."

"Each unto his own," agreed Lenz.

The physicist's excitement subsided; his face got pinched. The police chief led him over to the door of his office.

"You just get on calmly with your work," said Kamp. "We'll take care of your security. But you must follow our instructions."

"What would you have me do?" asked Lenz, turning round to face him.

"We need to bring one of our men into the premises of the Nuclear Centre," explained Kamp.

"My bodyguard?"

"Not exclusively."

Hugo Lenz thought for a moment and then he said: "All right. When will your agent turn up? Tomorrow?"

"Today in exactly forty minutes," came the chief's reply, as he looked at his watch. "Will you have time to get back to your place?"

"If I get moving."

"Do just that. What about a pass?"

"Here's one," said Hugo Lenz, handing a slim plastic disc to Kamp, on which some strange signs were indented.

"Who will meet him?"

"My secretary."

"There's just one condition," said the police

chief, taking hold of the door handle. "There must be complete secrecy. If you tell anyone who he is, it could mean the end of him. And of you, too, for that matter."

"My end's coming either way," said Lenz, waving his hand in dismissal.

"From now on, the nation's police force is assuming responsibility for your safety," Arno Kamp stated firmly. "All the King's horses, and all the King's men, as they say... And now you must hurry back to your labs."

After the physicist had left the police chief paced up and down his room for a few minutes, wondering how he should proceed with this unusual case. The outcome would depend on how correctly he managed to determine the strategy for this hunt in the vital early stages. He picked up one of the notebook pages from his desk and read slowly through the last part of the letter.

"For you, Hugo Lenz, there is only one way out—to abandon voluntarily your attempt to invade Nature's holy of holies, to invade life itself that has blossomed like an exotic flower among the ice-bound expanses of the universe. You must throw out into a bottomless abyss the keys that you have devised for that holy of holies, the keys to the Ultimate Secrets. You must make sure no one else shall ever find those keys. I give you three months for this. If at the end of those three months you have not fulfilled my conditions—then you have only yourself to blame. You shall die, and nothing will help you. When all is said and done, I hope that you will opt for the common-sense solution. In lieu

of a signature I enclose this violet. May it remind you not only of the beauty but also of the transitoriness of all on this earth of ours."

Kamp was about to smell the flower, but his hand stopped half way. An unexpected thought made him turn pale. What if the flower were poisoned? It would have been such a simple plan. Perhaps the flower was impregnated with poison that could be relied upon to act over a three-month period. Plots of that kind had been common enough in the middle ages.

A secretary came noiselessly at his summons.

"Take this down for an express-test, please," requested the police chief, pointing to the pages of the letter and the opened envelope on his desk. "Check fingerprints and the lot."

"Yes, Sir."

"Take the flower, too. Wait a moment, though. Put gloves on first."

Kamp walked over to the window. He started drumming with his fingers on the pane. These were all trifling precautions, but it was vital to do things thoroughly and keep calm. The tests would be completed within a matter of minutes. He needed to have that done before he could undertake anything else.

Unwelcome thoughts came to his mind. He remembered how Cesare Borgia used to give keys to the cardinals he wished to get rid of, and then request them to open a casket containing jewels or other treasures. The keys had a small ridge with slow-acting poison smeared on them; then, as luck would have it, the caskets had extremely still locks. The cardinals would need to grip the keys very tightly and this let the poison

penetrate their skin. Months later the unfortunate cardinals would fade away and grow pale until finally they gave up the ghost despite desperate efforts on the part of the physicians...

But since then science had made great advances. Diagnostic skills had changed beyond recognition. The electronic memories in run-of-the-mill medical computers could come up with all possible poisons and their combinations. If the bloodthirsty Catherine de Médicis had lived today, instead of in the sixteenth century, she would have been exposed the very day after her bastardly deeds were perpetrated.

It was a strange letter that Hugo Lenz had received. The text was typed: only the figure "3", referring to the number of months the recipient still had to live, was inserted by hand.

Kamp was also puzzled by Hugo Lenz's reaction to the anonymous letter and his behaviour in general. He had got the impression that the celebrated physicist had already come to terms with the idea of his imminent death and saw it as inevitable.

A sound like that of a plucked string brought the police chief down to earth again. He walked quickly over to his desk. A light was flashing on his video-telephone panel and the screen had lit up.

"Reporting the results of the tests..." came the voice of the senior analyst, slightly distorted by the membrane.

"I read you."

"The only prints found are yours and those of Hugo Lenz. The letter must evidently have been written by someone wearing gloves."

“What was the figure ‘3’ inserted with?”

“An ordinary ballpoint pen.”

“What kind of ink?..

“The standard variety.”

The police chief held back for a moment, refraining from asking the question he was so anxious to hear the answer to.

“The flower has not been poisoned,” went on the analyst.

Arno Kamp coughed and said: “You realize your very life may depend on the accuracy of these test results.”

“Yes, Sir, as always.”

The screen went dark. There was no doubt about the results of these preliminary tests. It would have been naive to expect any results with a mediaeval flavour.

Now he would have to call an emergency meeting. There was no time to lose. Perhaps the figure “three” was just a bluff and Hugo Lenz might be discovered the very next day either with his skull smashed in or with a bullet in his heart, fired from a pistol with a silencer?

* * *

Arno Kamp’s day had only just begun, yet it already looked as if there would be plenty of worries and problems ahead. There was the fire in the department store to deal with, the theft of a Rembrandt from the metropolitan art gallery, a student sit-in and, finally, the Hugo Lenz affair.

And what if Lenz’s trouble should turn out

to be the work of some secret organisation? That would be the last straw. Any one who thought a policeman's bread was earned easily needed to think again....

The chief's office was starting to fill up with various colleagues. The daily briefing was short—Kamp never relished words for words' sake.

They started with a discussion of the "violet" enigma.

The crux of the matter was not the banal assassination threat—things like that were, alas, usual happenings. What put Kamp on his guard was the unusual nature of the demands made by the criminal and also that the victim chosen was one of the country's leading scientists.

Various possible explanations were now being considered. Since nearly the whole of the text was typewritten, it had been decided to start with checking all typewriters in the country.

Arno Kamp's glance, as he surveyed the room, came to rest on a tough-looking black-haired young man sitting now in the same armchair that had held an excited Hugo Lenz a short while ago.

"Arthur Bark," the police chief said suddenly, "what contact have you had with physics?"

"I'm sorry ... with whom?"

"Physics. You have met, I suppose! ?"

"Haven't even set eyes on it," responded Bark, picking up the thread.

"From today on you're the closest of friends. I hereby make you a physicist, Mr. Bark," said the chief.

"But I can't tell a meson from a bison! "

"Such feats are not required of you. You're

to become a physicist, as far as the staff of the Nuclear Centre are concerned. You're to go there right away. Here's your pass and everything's been arranged. Hugo Lenz's secretary will be there to meet you at the East Entrance."

"Am I to be Hugo's bodyguard?"

"Among other things. Try and become part of the place. Find out on the spot what's going on, who might envy Lenz or be his enemy. In short, try and decide who might stand to gain from wiping him out."

"I'll take root there, don't worry."

"There's no time to lose. It's possible that the criminal will start acting not in three months' time but as early as tomorrow."

Arthur Bark nodded.

"The main thing to remember is caution," the chief went on. "What we've got to do is not frighten the flower-man, but get our hands on him."

Bark rose from his chair.

"Anything you find out, you're to report back here to me personally at any hour of the day or night," came the chief's final instruction.

"May I go now?" asked Bark, drawing up to his full height.

"Don't just go, but fly." Kamp looked down at his watch and went on: "Hugo Lenz will be back in ten minutes. You must be at the Nuclear Centre straight after that."

* * *

After getting out of the airbuggy still hot from the whirlwind journey, Bark sent it back.

He decided to cross the square on foot. He found it hot right away, the April sun was really summery.

He found the East Entrance quite deserted. Bark knew that people tried to avoid that area. There were persistent rumours to the effect that the radiation count around the Nuclear Centre was a good deal higher than elsewhere. The municipal authorities had arranged for several checks, that had shown these rumours as false, but had not put an end to talk of dangerous radiation levels. The local inhabitants maintained that there was a new type of radiation that could not be picked up by the traditional types of apparatus.

Whistling a popular tune as he went, Arthur Bark walked up to the security control point and slipped his thin identity disc into the slot. After the automatic check, a light flashed, hardly visible in the bright sun, and a narrow steel door slid slowly back to let him through.

It was not without misgivings that Bark stepped into the territory of the Centre that he had heard so much about previously. Yet his first reaction was one of disappointment. He was not confronted by either sophisticated manipulator-robots or structures—none of the things idle tongues concocted. The paths of the Institute's grounds had been swept tidy, and the well-maintained buildings, arranged in a chequered pattern, reminded Arthur of a hospital in which he had had the pleasure of spending a whole month after an ill-starred encounter with some street thugs.

The plane trees planted at wide intervals

were just starting to turn green. At the spot where the drive leading from the East Entrance fanned out in several directions, Bark stopped and looked around hesitantly. There was not a soul to be seen.

A kite was hovering in the dazzling blue sky. After tracing a wide circle, it began to fly down towards the Centre's grounds, then suddenly, as if it had bumped into an invisible barrier, the bird flapped its wings rapidly to regain height. A gentle but firm force had thrown off the intruder, now terrified to death.

The Nuclear Centre was protected by the invisible dome of a security field. "It's all true what they say—that not even the wind could break in here," Bark thought to himself.

Arthur drew himself up straighter as he saw a young woman coming out towards him. She did not respond to Bark's smile.

"Have you come in at the East Entrance?" she asked.

"Yes."

"You are Arthur Bark, an expert in neutrino pencil beams."

"Yes... that's right."

"I'm Shella Valeri, Doctor Hugo Lenz's secretary."

"Pleased to meet you."

"Come along this way, Doctor Lenz is expecting you."

On the way Arthur attempted to start up a conversation, but Shella answered only in monosyllables and not in a very friendly tone at that.

At a bend in the path Bark almost let out

a cry of amazement: in front of the door leading into the building was a flower-bed full of violets.

"Violets? At the beginning of April?" he asked.

"Don't forget the protective field," she explained, without looking round.

Only after entering the building did Bark realize why the Nuclear Centre had not impressed him very much from the outside: the main part of the installations was clearly underground. This you could tell from the long row of lifts ready to take people down. As yet he could only guess as to how deep down they went.

Doctor Lenz welcomed Arthur with a warm handshake.

"You're just the kind of expert we need at the moment," he exclaimed. "Come along."

They walked through various laboratories, occasionally bumping into other members of staff who, for the most part, appeared worried and gloomy.

"The nearer people are to their goal, the tougher things get," Hugo Lenz remarked in passing.

In one room Bark's attention was attracted by a large area of the floor surface covered over with thick sheets of plastic. He walked over to have a closer look. Lenz followed him but with obvious reluctance, as Bark himself noted.

Arthur looked through a gap between two ill-fitting sheets of plastic. He saw twisted fragments of some installation or other that had obviously been scorched by fire, distorted, black-

ened. In the concrete slabs of the floor deep dents could be seen with edges clearly melted into wavy shapes. Arthur felt he could detect something still burning inside them.

“What’s this here?” asked Bark.

“One of the reactors exploded.”

“What was the reason?”

“It was an accident.”

They were making their way along a narrow aisle through a laboratory when Arthur stretched out his hand to touch a shimmering brass orb, Lenz quickly pushed his arm away, so abruptly that Bark nearly fell over.

“Six hundred thousand volts,” explained Lenz.

Bark gave a nervous cough and then asked:

“Were there any fatalities after the explosion?”

“Fortunately not,” answered the physicist, coming over all depressed.

“Were people able to take shelter in time?”

“The explosion took place at night when there was nobody here,” said Lenz.

The tour of the laboratories was long and tiring. The two men came down in the lift and made their way through endless rooms and corridors.

Bark could hardly keep up with Doctor Lenz. Hugo’s gait was rapid, with a slight swing to it. He slowed down at last in front of one of the doors:

“Now I’ll introduce you to my first assistant,” he muttered quickly and pushed open the door.

The room was not large but very light. There

were no apparatus or machines here, only bookcases from floor to ceiling. On the shelves Bark could see tidy rows of books, biomemory blocks, and reels of micro-film. A man was writing at the desk, covered with a thick sheet of plastic. When the door opened he raised his head. He put down his pen ("A ballpoint," noted Bark) and rose to meet the visitors.

"This is Imant Ardonis, my right-hand man," explained Hugo Lenz.

Ardonis nodded.

"And this is Arthur Bark, a newcomer, specialising in neutrino amplifiers," Lenz went on.

"Just what we need," remarked Ardonis, brightening up.

Bark made a grateful bow.

Ardonis was good-looking, still a youngster. His face was clean shaven and he was using expensive after-shave.

"So you're back already, Dr. Lenz," commented Imant in an inquiring tone and pushed his blond forelock back over his forehead.

"Just this minute."

"Have you seen the police chief?"

"Yes."

"Did he promise to do anything?..

"He's got to investigate the situation first..."

"But did he read the letter at least?" asked Ardonis.

"Yes, he did that..."

"Why didn't he act at once then? You know, Doctor, if a crime is at all out-of-the-ordinary these would-be detectives are at a complete loss right from the word 'go'."

Lenz gave a discreet cough.

"I'll come and discuss things later, Imant," he said when he had got his cough under control again.

"All right, Boss."

"How's the accelerator getting on?"

"I've pushed on with the programme, without waiting for your go-ahead. The mass under bombardment is almost at the critical level, so that any delay..."

"That was the right thing to do, Imant," said Lenz, cutting him short.

Ardonis, obviously pleased at that commendation, nodded and began: "I jotted down some calculations here."

"More of that later. Now I must go and initiate our new colleague into our ways of working."

Imant turned his unblinking, slightly protruding eyes to Arthur, who felt as if the first assistant had looked right through him.

When Arthur stretched out his hand to take his leave, he noticed that Imant's long eyelashes twitched. Ardonis' handshake was so strong, that Arthur felt as if his hand had been caught in a vice.

When he and Lenz were outside in the corridor again Bark remarked: "That's no ordinary right hand you've got there! "

"What d'you mean—right hand?" inquired Lenz.

"I mean your Imant Ardonis," explained Bark, rubbing his hand. "He's got a really iron grip."

"Yes, he does grip one's hand very hard," agreed Hugo Lenz, thinking about something quite different as he spoke.

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A large ginger cat came out from behind one of the bends in the corridor. "Came" was hardly the word, though; it seemed to march past with an imperious air, holding high its bushy tail. Hugo's face seemed to liven up.

"I almost forgot to introduce my favourite member of staff! He's called Don Basilio," said Lenz. "As you see, a most important personage! "

"So I see."

"Truly, he's indispensable."

"Is he an animal used for experiments?"

"Heaven forbid," said Lenz with a smile, looking tenderly down at the animal. "Don Basilio is a full-fledged member of the research team. A remarkable creature! "

"In what way?"

"If only for the fact that he has been here since the day the neutrino laboratory was opened. At that time, of course, he was only an untrained kitten, but now, as you see, he's a full-grown, mature cat."

The cat walked up to them and started rubbing up against Hugo Lenz's trouser leg. Hugo leaned down and scratched the cat behind its ears. Enjoying the attention, the cat lay down on its back, purring happily and shaking its four paws to and fro.

"Basilio seems very fond of you," said Bark.

"Yes, he is," agreed Hugo, standing up straight again. "He's present at all the experiments I do."

"He must be very learned by now then! "

"He knows as much as certain scientists here! " said Lenz as they moved on down the corridor.

“You can be sure of that. If Don Basilio could talk, any foreign intelligence service would be ready to pay through the nose for him. But, that’s not my province! ”

They stopped by a generator that was emitting a low constant hum.

“Well, you’ve seen the whole of my department now,” said Hugo Lenz. “And all the staff, including Don Basilio.”

“Have you shown me all the rooms?”

“Except one.”

“A secret department?”

“My office.”

“I’d like to see it, please.”

Lenz frowned and then said: “There’s nothing special in there. But you’re welcome if you want to, if it’s essential for the job...”

Hugo Lenz’s office was a corner room. The dusty windows and the papers strewn over the floor made it look far from cosy. The table was piled high with hand-written papers, books, and files of notes. “More like a writer’s desk than a scientist’s,” thought Bark to himself.

On a separate table by the window stood an object which made Bark stop in his tracks: it was a typewriter.

“D’you type yourself?” he asked casually.

“I have to every now and then,” replied Lenz.

“As a child, I dreamt of being able to bang away at one,” said Arthur Bark and stroked the keys affectionately. “The typewriter in question belonged to a neighbour; he was a lawyer and horribly stern. Once he rapped a ruler across my fingers and I can still feel the pain of that blow.”

"Now, you can let your old dream come true," remarked Lenz in an absent-minded voice, as he sorted out some papers on his desk.

Arthur put a clean sheet of paper into the typewriter and typed out some lines at random—just a haphazard collection of letters. Then he took out the paper, folded it and put it back into his pocket. Lenz, standing with his back to Bark, was still going through some papers.

"Who comes into your office?" asked Bark.

"No one. I don't even let people tidy up in here."

"One can see that," Bark thought to himself, but refrained from saying as much out loud.

"You're working on a book, I expect?" asked Bark, after they had left the office.

"A book?"

"There are so many papers on your desk. Notes, jottings," explained Bark.

"I've no time for writing books," said Hugo with a casual wave of his hand. "Earlier, I did have the idea, I must admit. I prepared some material for one even. But now ... I'll be glad if I can sort out my diary entries in the time that's left me."

"I can see you have a great deal of work."

"Particularly now. There's hardly a moment to breathe. It's only coffee that keeps me going. I drink it all the time," Lenz added.

As they walked down the corridor the sheets of plastic underfoot muffled the sound of their steps.

"D'you make your own coffee?" asked Bark all of a sudden.

"I haven't mastered that technique," answer-

ed Lenz with a smile. "I have to rely on the good will of my colleagues. Either I grab a cup in the lab or Shella brings me one. She's got a percolator."

"What about your office?"

"No, there's no coffee-making equipment in my office," said Lenz. "All I have here is a Bunsen burner and a retort."

"Who makes coffee in there?"

"Imant," answered Lenz absent-mindedly. "He's an addict, too."

"But you said that no one except you goes in there."

"I'm sorry. It slipped my mind completely... But that's natural," Hugo went on. "Imant Ardonis is my first assistant, or rather my alter ego. In every respect, as far as work's concerned."

"That may be, but let's be more precise. As far as I understood it, Imant Ardonis comes into your office fairly often."

"Of course," agreed Lenz and then suddenly stopped. "Wait a moment, you're thinking that it's Ardonis... That's out of the question. Ardonis is my right-hand man."

"There are times when one's left hand doesn't know what one's right hand is up to," remarked Bark.

"Out of the question," repeated Lenz, sounding worked up by this time. "I trust Imant completely."

Bark said no more, just felt to make sure the folded sheet of paper was in his pocket. At Lenz's suggestion they sat down in a small lounge formed at the junction of two corridors.

"It's my heart," said Lenz resentfully, "I

wouldn't have known I had got one until the last few days."

The physicist and his new bodyguard sat without saying anything for a few moments and then Bark lit up a cigarette and said: "One thing worries me. When it comes to my own profession I know what I'm doing, but I haven't the first clue about physics."

"Each unto his own."

"Yes, quite," agreed Bark but went on. "What if one of your staff starts up a scientific discussion with me—I'm done for, then. They'll realize I'm a sham straight away."

Lenz thought for a moment and said: "I'll tell everyone that the subject of your research is secret and then no one will try and pry into your affairs."

Then Lenz looked at his watch and suggested they go and have some coffee. Arthur was more than willing. He thought it would mean that they would go to Imant's room, but Lenz called up Shella instead, using the videophone.

Soon she came in with two cups of coffee on a tray. The coffee was strong and piping hot. Bark thought to himself that coffee was obviously a well established routine.

After putting his cup back onto the tray, Arthur caught the glance Shella cast at Lenz and decided that the old man must feel quite at home here, in this atmosphere of universal homage. At any rate until recently.

Noticing that Arthur was looking at her, Shella blushed and turned away.

"Why aren't you having a cup with us?" Lenz asked her.

"Thank you, Doctor Lenz, I've just had a cup," said Shella and left after collecting up the used cups. Bark watched her walk away.

He only just started to comment that the French say a woman's beauty lies in her walk, when he noticed a glint of cold disapproval in Lenz's eyes, and stopped.

He went on as if nothing had happened and asked: "Could you explain to me, Doctor Lenz, exactly why are you bombarding those quarks?"

"In order to study them more closely. As we do so, we study the interaction of the particles and this enables us to examine their structure and understand it. Mediaeval anatomy marked time until doctors began studying the human body by dissecting corpses."

"And is that work actually dangerous?" Bark asked. "The author of that letter writes..."

"I remember every detail of that letter," interrupted Doctor Lenz.

"But it would be horrible," said Arthur, "if the whole planet was actually reduced to a corpse."

"Yes, there is that danger," said Lenz in deliberate, measured tones. "But what would you suggest, young man?"

"Me?" gasped Arthur completely at a loss.

"Yes, *you*, and no other!"

"But I'm not a physicist."

"That's not an answer. Everyone should decide that question for himself, since the fate of the world is something that affects us all."

Bark hesitated as he searched for an answer, and then began: "Well, you see, exceptional

circumstances are involved here. Your life is threatened if you don't stop the experiments."

"In deciding the question I've put to you, my life is too insignificant to be taken into account," said Hugo Lenz.

Arthur sensed intuitively at this point that the conversation had taken a serious turn and that his answer was obviously of deep concern to Lenz for some reason or other.

"I shall help you," said Lenz, looking at his interlocutor. "Suppose, my life was not under any kind of threat. Then what would your answer be? Should the bombardment of quarks continue or not?"

"I think I should ban the experiments anyway," said Bark thoughtfully. He had hoped his answer would arouse a sympathetic response, but Hugo Lenz's face remained inscrutable.

"Have you really thought it all out carefully, before deciding to ban the experiments, Arthur Bark?" inquired Lenz. "It's not the banning of some second-rate experiments that we're discussing. It's the all-important field of scientific research that's under discussion here, work aimed at probing the innermost secrets of Nature."

"But if these experiments put the whole of mankind in danger?" insisted Arthur.

"Danger," Lenz smiled condescendingly. "But everything around us is fraught with danger. There's danger in a child's first step that he takes independently, with no help from his mother, isn't there? Or was there no danger for the pilot in his pioneering flight if his nerve went? That might have made being air-borne an unat-

tainable dream. And so it is with everything. Nothing venture, nothing win. Without risk there can be no victory or progress.”

“As regards the first air-pilot, as far as I remember, the situation was slightly different from the one we’re facing now,” commented Arthur, who was by now worked up himself. “If there had been no Wright brothers other people would have come along.”

“You think so?”

“Certainly. Mankind was ripe for it and nothing could hold it back. If one man perishes, another takes his place and if the second fails, a third comes forward.”

“Why d’you think mankind isn’t yet ripe to split quarks?” asked Lenz.

Arthur was anxious to put an end to that conversation and, pleading his incompetence adopt a lighter approach to the subject, but he did not know how to go about it.

Lenz looked at him gloomily, waiting for the reply.

“It’s not just a question of whether mankind is ripe or not,” Bark objected, “but that these experiments, as far as I have understood, put mankind’s very existence at risk.”

“No, the crux of the matter is mankind’s level of readiness,” retorted Hugo Lenz curtly. “If the results of our experiments fall into irresponsible hands...”

“Then make sure you don’t let that happen,” advised Bark.

“That’s not being serious, Mr. Bark,” said Hugo, cutting him short in an irritated tone. “Regrettably, our state is run not by men

of learning, but politicians with interests in big business."

"Yes, but you could come to terms with them..."

"Could we? What are you looking at me for like that? You think the old fellow's nuts? I don't know why, but you've got the kind of face I trust. And, besides, when a man's only got three months to live, he can allow himself the luxury of speaking his mind."

Lenz's beard started to shake as he grew more and more excited.

"Even if I were to take things into my own hands and put a stop to the experiments," he went on, "where's the guarantee that some other physicist might not hit upon the idea behind these experiments very soon afterwards?"

"You need to throw the key so far away, as to make finding it again extremely difficult," said Arthur. "Perhaps while the search is on, the situation might change."

"And how can that be done?" came back Hugo Lenz unrelentingly.

They had only met just a few hours before, but Arthur felt as if he had known Doctor Lenz for years. There was something prepossessing about the old man with the pointed beard and the probing, restless eyes. True, his views were a bit too bold, but, when all was said and done, that was not Bark's province.

Lenz's life was threatened, and here he was discussing the fate of the world. But, perhaps, it was the other way round; perhaps some ordinary disease had made him so talkative?

“You can go down below now and see the accelerator for yourself,” said Lenz in a calmer, more usual tone.

* * *

The rest of his first day on this assignment Arthur Bark spent looking at Cyclopean installations that formed a whole underground town. At the same time, he made a careful study of the people he encountered and started attempting to put two and two together. He tried his best to avoid scientific subjects, and luckily, none of those he talked to touched on problems of neutrino focussing.

When members of staff started casually throwing terms about that were double Dutch to Arthur, he just stood there with an inscrutable look on his face as if to say that he did know a fair amount about them, but because of his top-secret work was not in a position to talk about such things. Arthur Bark finally left the Nuclear Centre with his head spinning from the sheer volume of new impressions.

He was burning with curiosity to examine the sheet of paper folded in four in his breast pocket and resolved to adhere to the golden rule which demands that one should never put off till tomorrow what one can do today. Before going home, he decided that he would look in at his department and check some details regarding the typewriter in Doctor Lenz's office.

He went down into the underground railway. The train was crammed full and what with the

inefficient ventilation and the soporific swaying Arthur Bark soon dozed off.

He showed no surprise when Shella Valeri made her way through the crowd to him. For some reason he had been expecting that he would bump into her, although earlier in the day he had not managed to start up a real conversation with Hugo Lenz's somewhat chilly secretary.

"Are we going in the same direction?" asked Arthur.

"It looks like it," said Shella with a smile. Previously, at the office he had seen no sign of a smile. They talked about trivialities for a time without taking any notice of the crush around them. Then Arthur took Shella's arm and together they left the stuffy train and came out into the fresh air.

It was a cool evening, but the houses gave off heat that had accumulated during the day. Bark looked round him and realized that they were on the outskirts of the city. The neon ads were not quite as wild as in the centre. It was the first time he had been in this particular part of town.

"Where shall we go?" asked Shella.

"Let's just follow our noses," replied Bark.

They walked down the street that seemed strangely quiet and deserted. Shella chattered away without stopping as she walked along on Arthur's arm...

"I thought you were more silent than the sphynx, at first," said Arthur, looking at the animated face of his companion.

"I lose my tongue in the presence of Doctor Lenz," admitted Shella.

“So I noticed,” responded Bark in a sarcastic tone.

“Don’t be silly now,” Shella said, giving him a pat on the hand. “Doctor Lenz is old enough to be my father.”

“Exactly.”

“I’m fond of him for his kindness, and respect him as a scientist.”

“Is that all?” asked Bark sounding unconvinced. “After all, I saw the kind of looks you were giving him! ”

“You really are being silly! ” laughed Shella. Her laughter was astonishingly attractive, like the peal of a little silver bell ringing out in the deserted street..

“I liked you from the moment I saw you,” said Shella. “Right from this morning, when I came out to meet you at the East Entrance,” she added, a little sheepishly.

Now as it was growing darker the phosphorescent walls of the buildings began to shine more brightly. The shadows cast by the care-free, strolling couple now swelled to giant proportions, now almost faded to nothing.

“And aren’t you worried, Shella, by the fact that Hugo Lenz’s life is in danger?” asked Bark.

“You mean that stupid letter he got?”

“I think there’s every reason for taking the threat seriously.”

“Perhaps you’re right,” said Shella. “But I’m the only one who knows how to get rid of that danger.”

“You know who wrote the letter?”

“The letter wasn’t necessarily written by a person. A text like that could have been devis-

ed by any computer, all someone would have to do would be to programme it properly. Then typing it up is something any oaf could cope with."

"So you don't think Hugo Lenz is in any real danger," asked Bark, bewildered by her reaction.

"On the contrary. If we just sit back and do nothing Doctor Lenz will have kicked the bucket in precisely three months' time."

"But who would dare raise a hand against him?"

"Not a hand, but a paw."

"Paw?"

"I have already noticed that you are not particularly observant," said Shella, laughing again. "But that applies to the rest of our department as well."

"Even Doctor Lenz?"

"Yes, unfortunately. But let me tell you the rest of the story," Shella went on in a low voice. "Did you notice Don Basilio in the department?"

"You mean the cat. Yes, a fine animal. Doctor Lenz introduced us."

"Basilio is not a cat but a cybernetic device," Shella continued in a whisper. "I'm the only person who is in the know."

"No one else in the department realizes?"

"No one. Didn't you know that feline reflexes are very simple to programme?"

"But who on earth would need a thing like that?"

Shella shrugged her shoulders and said: "Everyone has enemies. Particularly someone like the country's leading scientist. It's not that easy

to get into the Nuclear Centre, as you yourself have seen. An assassination out in the street is also no easy matter to organise. That's what made them think up Don Basilio. Now d'you understand?"

"Not completely. Doctor Lenz said that Basilio had been brought into the department as a young kitten..."

"Anyone could see you don't know the first thing about cybernetics. It's no problem for a designer to construct a model whose scale can change in the course of time and grow larger or smaller, as required."

"Like some kind of a balloon?"

"More or less."

"Why didn't Lenz's enemies simply kill him instead of giving him ample warning?"

"Probably because they hoped to stir up panic, and make the job more difficult for the police. They have their hands full as it is. In the end they'll be up a blind alley. Funny, isn't it?"

"I don't see anything funny about it," retorted Arthur. "Why didn't you report the whole business with Don Basilio to the proper authorities?"

"I've never grassed on anyone, and don't intend to," said Shella curtly. "It makes no difference whether it's a person or a cyber involved."

"So you're prepared to let Hugo Lenz meet his end?"

"No, he won't. When the time comes, I'll open his eyes myself."

All of a sudden, a large grey shadow appeared

at the end of the deserted street. Without a sound it was stealing up towards Shella and Arthur. Soon, they were able to make out its shape and recognise the noiseless steps of a light-footed animal.

"Don Basilio! " gasped Shella, her eyes wide with fear.

"How on earth did he get here?" asked Arthur, gripping Shella's thin hand.

"He must have anticipated my plans. He's tracked me down. He'll kill me! " screamed Shella. "Run! "

Don Basilio made ready to pounce on them, but just in time they darted into an archway. In the courtyard beyond it was dark. Holding each other by the hand, they ran past buildings that loomed black in the night and only stopped when Arthur felt that his heart would burst if he ran a step further.

"Heavens, wherever are we?" whispered Shella, as she started to get her breath back.

"We'll get our bearings in a moment," said Arthur and gave a push at the first door they came to. There was no one inside. In the middle of the floor was an accelerator like the one Arthur had seen earlier in the day at the Nuclear Centre. Was it really the same enormous installation shrunk almost to nothing? And who could have set it up out here? Arthur walked up to it and touched one of its levers.

"Don't! " shrieked Shella.

But it was too late. A blinding flash filled the room, followed by a thunderous explosion. Arthur felt a wave of heat strike him in the face.

"I think I'm hurt," came Shella's voice, all

faint, as if Arthur was hearing it through ears plugged with cotton-wool.

Arthur then lifted up the feather-light girl and put her carefully down on the floor. At the place where the accelerator had stood but moments before, there was now only a heap of twisted metal fragments. Some of them were still red hot, and giving off a reddish glow.

Shella's hand had been hit by a splinter of metal. Large drops of blood pattered onto the floor. "Her blood's black like coffee," he thought to himself.

"Shella, dear Shella..." whispered Arthur in horror. He tore a strip off his shirt to make a bandage for her.

"Don't bother..." said Shella in a slow calm voice. "The wound is a trifling one. I'll have gone within minutes."

"But you can't walk in this state..."

"I won't be leaving. I'll just vanish, disperse. You turned the accelerator on and triggered off an uncontrolled reaction. I was exposed to the radiation. Bye, Arthur..."

Bark watched in horror, glued to the spot by the terrible spectacle, as Shella began to melt away and evaporate in the close air of that half-dark room, a room that they had entered by chance and that had turned out to be a fatal trap.

"Shella," roared Arthur at the top of his voice.

He was woken by someone nudging him hard in the side.

"You're not supposed to sleep in these trains," came a kind but nevertheless disapproving voice of an old man right next to his ear.

Back at his department, Bark hurried to the forensic section. Fortunately, a friend of his was on duty. This officer, nicknamed Barbarian by his colleagues, was usually ready to comply with the most trivial of Arthur's requests, so long as they had nothing to do with money. But on this occasion, much to Bark's surprise, all his request for a check-out of the typewriter met with was an angry outburst.

"What are you all up to," spluttered the Barbarian. "In one day I've been pestered for tens, no, hundreds of thousands of sample checks. The section is in an uproar. Just explain to me, Toughie: if they find the typewriter that this wretch printed his message on, what then?"

"If they find it, that'll narrow down the range of suspects," said Arthur.

"That much I know without you having to tell me!" burst out the Barbarian. "If only those physicists would fiddle around with atoms a bit less. They're taking the wind out of their own sails. The radiation levels in this city are so high that ... they say it's dangerous to walk anywhere near the Nuclear Centre."

"That's an old wives' tale."

"All right, have it your own way," conceded the Barbarian pulling himself together and speaking in a much calmer tone. "Give me that text now and I'll check it." He turned over the sheet of paper Arthur handed him several times and then asked: "Did you type this yourself?"

"Yes."

"That's clear enough from the really meaningful text," commented the Barbarian with a wry smile. "I've had some really strange samples

of police fantasy today, you know. One chap even put in a request for a rise. In comparison with some of the others, you've produced a real work of art, albeit abstract. Well, now. Let's have a look. Maybe you turn out luckier than the others."

While the Barbarian rummaged around on his desk, muttering something under his breath, Bark sat down on a nearby chair.

"I'll have to disappoint you, I'm afraid, Toughie," announced the Barbarian a few minutes later. "You're very wide off the mark."

"It's not the right typewriter?"

"Nothing like it. Look at this capital 'Y'—it's got quite a different stem."

Feeling rather disappointed, Bark got up as if to leave. The neat answer to the riddle that he had devised was now in pieces.

The picture Bark had thought out was convincing enough: the prominent scientist was envied by his ambitious assistant who enjoyed the complete confidence of his superior. The assistant used to dream of heading the institute, but his chief stood in his way. So the assistant wrote a threatening anonymous letter, recommending that the chief remove himself of his own accord, leaving no traces. No direct instructions were contained in the letter that was deliberately ambiguous and full of high-flown phrases. The scientist heading the institute would, according to the assistant's plan, take fright and simply leave the stage, or, better still, have a heart attack.

The psychological calculations of the assistant had been accurate enough: indeed, who

would think of checking out the chief's own typewriter? Everyone knew that only Doctor Lenz himself used that one. And who would write a letter like that to himself?

This solution involving the assistant had seemed convincing enough; after all competition was a law of life, wasn't it? And that was something Arthur Bark had taken very seriously, ever since the nursery. What a shame that this solution had been exploded almost before it had taken shape!

It would be wrong though to hurry in drawing conclusions. Imant Ardonis was not such a fool as to leave tracks. There was nothing to have stopped him typing the letter elsewhere, in a safer place. It was too early to strike him off the list of suspects. Bark pictured that handsome but arrogant face, the cold unblinking eyes and the contemptuous look.

"We'll pin you down yet, iron-grip man," thought Bark to himself.

"I've been thinking, Barbarian," said Arthur all of a sudden, as he paused in the doorway, "what if the letter had not been typed by a person."

"Who else would have done it?" asked the Barbarian in surprise.

"A machine, perhaps?"

"I shouldn't think so."

"But computers can devise various kinds of text, even verse," Bark went on.

"You're going round the twist. Perhaps you think a machine thought up the violet, too?" inquired the Barbarian, but then added in a decisive tone: "No, only a human being could

sink as low as that.”

“You never know.”

“Even if the letter was written by a machine,” said the Barbarian. “Who in that case would carry out the threat?”

“A machine as well. In the form of a cat perhaps...”

“What cat?”

“An ordinary cat, with four paws and a tail,” elucidated Arthur.

“You made me sick!” roared the Barbarian back at him. “Can’t you ever call it a day with those stupid jokes of yours?”

“I’m not joking.”

“Then you’d better go and see a doctor. I told you radiation levels were getting high around here,” said the Barbarian, tapping his temple to imply that Bark was losing his grip.

After taking his leave of the Barbarian, Bark set off to report to his chief on his first day spent at the Nuclear Centre. On the way there, however, he met Jules, who informed him that the chief had just left.

“He’s flown off somewhere?” inquired Bark.

“He’s just walked off,” said Jules, putting the record straight.

* * *

Rina liked watching Hugo at work. She would sit in a nearby armchair with her legs drawn up, while he sat at the writing-desk, spreading out his papers in an order intelligible to him, and him alone. He was in his element there, and even

if a cannon had gone off outside he would not have so much as batted an eyelid. Nothing existed for him at such moments except the pencil and paper on which he would swiftly jot down his calculations, covering sheet after sheet with intricate patterns of numbers.

Suddenly the chair was pushed back and fell to the ground with a crash, as Hugo Lenz swept Rina and whirled her across the room, in time to the Strauss waltz he started to hum.

Hugo's life with Rina might well have been compared with a well-oiled machine. Minor differences were soon mended, and whenever Hugo Lenz had to rush off to a testing ground in some remote corner of the country, he would take his wife with him. Even a single day spent apart weighed heavy.

When Hugo became famous they began to travel a good deal, for Doctor Lenz would be invited to all major physics congresses or symposia.

Only on one occasion did Lenz set off to a nuclear congress without Rina and that had been in Japan. He came home gloomy beyond recognition and with very little to say for himself. In answer to Rina's queries about the land of the Rising Sun, Hugo replied: "Hiroshima is a wound that will never heal. I'm glad you didn't see it."

When it came to the housework, Rina had the services of Robin—a proto-robot—to make life easier. He had long since become a third member of the family, so to speak.

The days and months sped by, the years passed without their hardly noticing it and then,

all of a sudden, something went seriously wrong with the well-oiled machine.

It had all started the day before the letter. The events of that night had made such an indelible impression on her that Rina could relive them in her mind down to the minutest detail.

They had already gone to bed and Rina was almost asleep when Hugo jumped up all of a sudden. "I've hit on it!" he exclaimed. "I'll just go and jot this idea down or it'll escape me for ever. You get some sleep." Hugo gave Rina a hasty kiss and then hurried into his study.

Rina put out the wall light and for a long time just lay there in the dark with her eyes wide open. She was long since used to Hugo jumping up with new ideas at the most inappropriate times. When he had a brainwave there was no stopping him: he would push his food away if at table, jump out of the bath and throw a towel round himself, or abandon a game of chess, so as to be able to grab at the first available piece of paper and bury himself in his theories.

At first Rina had been surprised and somewhat put out by this behavior and she used to try and bring her husband down to earth again out of his trances, asking if he would soon be finished. In an absent-minded tone he would say it was only a matter of a minute or two, but jotting down "ideas" was no simple matter and the minutes often developed into long hours.

As the years went by Rina learnt to treat the "ideas" with respect, after all it was thanks to them that her husband had joined the ranks of the world's leading physicists.

The couple's favourite pastime in their rare

moments of leisure was playing chess. In her day Rina had been college champion. She had been a consistent, fairly strong player: once she had even taken part in a men's tournament on a small scale. Hugo looked upon himself as a run-of-the-mill amateur and never played at tournaments. And then, what set of regulations would have ever made it possible for him to drop a game in the middle and, to the great amusement of his opponent, bury himself in the maze of theoretical physics, forgetting about everything else around him?

An embarrassing incident of that sort had taken place during a game with the Swedish King, which had been arranged between two ceremonial functions connected with the presentation to Hugo Lenz of the Nobel Prize. However, the King had proved a model of self-control: he had waited for Hugo a whole hour. Rina, on the other hand, had nearly died of shame.

She thought back to those incidents as she lay in the dark with her eyes wide open. At last she fell asleep despite herself.

All of a sudden she woke up with a start, as if someone had been shaking her. Hugo was not in the bedroom. The luminous hands of the clock showed it was half past two. Her heart missed a beat and she was filled with foreboding. She walked into the study over the plastic tiles that were cold to her bare feet. But there was no one there: the study was empty. Rina went right round the house and even looked into the hot-house. Then she went into the workshop where Hugo sometimes used to try his hand at fashioning metal, but he was no-

where to be seen. Sleep eluded Rina for the rest of that night.

At dawn she went out onto the verandah. The surrounding buildings were swathed in a spring mist that had descended over the city outskirts. All of a sudden some sixth sense made her realize that Hugo's ornithopter was approaching the house. She would have been able to pick him out from thousands. They had flown countless miles together on the old craft, which Rina would have hated to exchange for a new one.

Rina quickly ran into the bedroom and lay down in the bed, pulling the quilt right up to her chin.

"Are you asleep?" asked Hugo in a gentle voice as he shut the door carefully behind him.

Rina opened her eyes and inquired: "Well, how's the idea?"

"Things are going all right. D'you want some coffee?"

"I don't feel like any."

Later that morning Hugo Lenz had flown off to the Nuclear Centre without referring to his absence of the previous night.

Then came the letter with the violet.

Pride prevented Rina from asking questions. The young woman had always considered that she was above jealousy. The best thing would be for him to make a clean breast of it. But without prompting from her, and without hiding anything.

Who might her rival be? Any number of women.. Young girl students used to write forty-four-year-old Doctor Lenz personal notes sometimes. Even people he did not know at all, who

had just seen him on the television screen. Perhaps it was his secretary, Shella Valeri? What difference did it make? Anyone, so long as he was happy. Probably Hugo still dreamt of having a child, a son. He never talked about it, but she knew it was often on his mind. Well, she was not going to foist herself upon him—or stand in his way.

That night was to be a watershed in their life together. Rina had soon made up her mind to leave her husband and would have done so, had it not been for that wretched letter. She could not leave Hugo at this moment of crisis.

Her feelings for Hugo ran deep like the love for an only child, but Rina hid them beneath a mask of banter, which sometimes bordered on causticity. There were always plenty of admirers at her heels, but Hugo always remained completely indifferent to these would-be suitors of his young wife.

“And what about jealousy?” Rina asked him once, when Imant Ardonis had invited her to the theatre and Hugo with a nod of his head had indicated his consent to spend the evening at home on his own.

“Caesar’s wife is above suspicion,” replied Hugo.

“Who needs a wife above suspicion?” echoed Rina with a mocking laugh.

To have to come to the conclusion that Hugo was deceiving her was a bitter blow, but everything paled in face of the new calamity. Before they could turn round, the first day of that meagre time ration of three months had passed. The candle had burnt down a fraction lower,

and a few grains of sand had fallen through the hour-glass. Hugo was on edge and had lost his appetite. He had gone without supper. Rina was staring into the dark, torturing herself once more. Hugo had said that he was going to go and work in his study. Perhaps there was no trace of him by this time? She did not have the strength to get up and go and have a look.

But what difference did it make? She had resolved that she would not abandon him, till the danger was over.

* * *

Everything seemed set to gladden even the heaviest of hearts that April morning: the clear sky glowing blue from behind the intricate pattern of distant peaks on the horizon, the new leaves on the trees down below and the smooth running of the airbuggy.

Meanwhile, the routine of the police chief's life was being interrupted by one surprise after another. Hardly had Arno Kamp come into his office and started reading through police reports received during the night, when Jules appeared in the door.

"May I, Chief...?" came the deferential request.

Arno Kamp nodded without saying a word, picking up from his desk the statuette of an Arab steed.

"You have a visitor," announced Jules, handing him a visiting card.

"Yves Soitch—Director of the National Centre

for Geological and Archaeological Research,” Arno Kamp read out.

He put the visiting card down and gave instructions for Soitch to enter.

A rotund, but nevertheless nimble man stepped into the office. In dignified tones he introduced himself and sat down in the armchair indicated by Kamp. Then he wiped the copious sweat from his face with a checked handkerchief and waited for Jules to shut the door on his way out.

“What can I do for you?” asked the police chief.

“Take a look at this,” said the plump man and handed him an envelope that had already been opened.

As he took the envelope, Kamp had already guessed what was up.

Soitch watched carefully the expression on Kamp’s face. When he had finished reading the letter, Kamp folded together the notepad pages and then shook the envelope only to see a flower fall out.

“When did you recieve the ... the ... this letter?” asked Kamp, stumbling over his words, something which only happened to him in moments of severe agitation.

“In this morning’s post.”

“At home?”

“At work.”

There was no doubt about it. The style was familiar! The letter-writer in question did not bother to vary his style. The text was typed. The time the recipient had left to live was filled in by hand. Here there was a difference,

though. This one difference consisted in the fact that Yves Soitch had a whole eighteen months allotted to him instead of three months as in the case of his predecessor.

"What do you think about this letter?" asked Arno Kamp.

"If it's a joke, then it's an incredibly stupid one," replied the fat gentleman in indignation.

"I'm afraid it's more than a joke," warned Arno Kamp, shaking his head.

"It's not that I'm afraid of death," explained Yves Soitch. "But just take a look at the ridiculous demands put forward by the author of that letter. Stop all deep drilling! Stop drilling wells on the sea-bed! Then the motives?! He would have us believe that we are destroying our planet by boring holes into the crust of the Earth!" The rotund visitor explained, almost out of breath in his fury by this time. "He thinks that some magma is going to come pouring forth out of a bore-hole, destroying all living things."

"But isn't that so?"

"A cock-and-bull story," commented Soitch in a dismissive tone. "But you know, I'm starting to get an idea as to who might have written that letter."

"Well, go on," the police chief encouraged him.

"Rivals, who else? You see, with the authority vested in me by the President, I now have to see to it that all deep drilling in the country is brought to a halt. The natural question that gets asked then is: who stands to gain from this step? The answer is quite simple: those compa-

nies, which have only been carrying out surface mining... But have you any idea what that means, to call off deep drilling? It means freezing investment worth millions, dismantling unique installations specially built for the job. For this enormous task I am given a generous schedule of eighteen months by the author of this letter,” Soitch added by way of a rueful summing-up.

Kamp leant back in his chair and said: “I’m a non-starter when it comes to geology. But is all this deep drilling really necessary? It’s mentioned in the letter that our planet resembles a coconut: beneath the hard but very thin shell, liquid is held under tremendous pressure. The author goes on to say that if the shell is broken up this might well bring untold disasters to mankind. Are you, as an expert, in agreement with this assertion?

“Well ... you see...” said the fat geologist fumbling for words. “Each new technique involves some degree of danger. Deep drilling is no exception. When you start out on something new there are always going to be risks.”

“But what about this bit?” Arno Kamp searched for the paragraph in question and then read out: “ ‘If we disrupt the processes at work in the bowels of the earth then our planet may well burst like some rotten nut...’ And so on and so forth. Is that really possible?”

“Never! ” exclaimed Soitch with conviction. “As for the philosophy spun by the writer of the letter, it’s not worth the paper it’s written on. As a geologist, I’m convinced that mankind’s future lies not in outer space but Earth, our

original cradle. Over millions of years evolution has come up with a type of intelligent being suited not to just any conditions but precisely to those obtaining on Earth. The human body is adapted for life on Earth and Earth alone—to this planet's gravitation, to its atmosphere, to the solar intensity and radiation levels found on Earth."

"But other planets..."

"Man will always feel a stranger on other planets. Take the settlers on Venus or Mars. Theirs is a miserable existence. They have to keep on those heavy space-suits, their dwellings are like prisons for if the hermetic pressure cannot be maintained that's the end. And what about the war against the native populations up there that's been going on for twenty years already and looks as if it will drag on for ever?"

"There is another way still open to us for conquering other planets," noted Arno Kamp.

"You mean cybergisation."

"Yes."

"I'm against any restructuring of our own bodies in principle," observed Yves Soitch. "The one I have already is more dear to me than any kind of apparatus, however much the admen might crack them up... No, man's future is here on Earth," repeated the fat man in tones of firm conviction.

"Perhaps life on Earth isn't so bad, after all," said Arno Kamp, "but there's not going to be room for us all."

"There's still any amount of space."

"I wouldn't have said so," objected Arno Kamp. "There are no deserts left on earth, no

uninhabited mountains which used to be regarded as unassailable.”

“You’re talking about Earth’s surface. We need to move in deeper.”

“Houses are now being built with dozens of floors underground.”

“That’s only a beginning,” remarked Soitch disparagingly. “A scratch on the surface. We need to burrow right through the Earth, make a real honeycomb of it. We need to be able to build at almost any depth. Incidentally, that would provide us with shelter from any dangerous atmospheric phenomena, indeed from no end of dangers. A good layer of earth is the best possible protection from all kinds of cosmic hazards that the astrophysicists love to warn us about. I only feel really calm when there’s a layer of earth several miles thick over my head.”

“It’s all very well to say ‘to burrow right through the Earth’, ” said Arno Kamp. “But what about the molten magma?”

“We have the wherewithal to control that nowadays. What’s more, the magma contains every conceivable type of mineral deposit. There is no need whatsoever to fly into outer space for them, everything we require we have here under foot.”

“So it means that man’s life on Earth is going to be like that of a worm burrowing its way through an apple?” Kamp mused.

“No, like that of an eagle in its nest,” Yves Soitch replied.

“An eagle with clipped wings,” objected Kamp, looking at his watch. “We’ll give you

protection. But for the time being, I don't really think there's anything for you to worry about."

"You don't think there'll be any attempt on my life before the eighteen months are up?"

Kamp did not answer that one.

"What will your protection amount to?" asked Soitch. "Some sort of escort?"

"You won't notice it!" promised Kamp.

* * *

Again, for the umpteenth time in the past two days Kamp asked himself whether the whole business of violets and letters was not some kind of bluff. Perhaps it was no more than bluff, but that did not make things any easier for him, as chief of police. When people like Lenz and Soitch were under threat, this is bound to get around. In general, threats to people highly placed in government always stir up unrest. It means that something as fragile as a social order might be turned on its head.

Whether it was a question of bluff or not, the man sending out these letters had to be caught. The wider the net is cast, the better the catch, Arno Kamp kept reminding himself. The network of his agents was indeed fairly wide flung. They were employed to listen into conversations in the street and in cafes, to infiltrate themselves everywhere, sniffing out all they could and trying to probe out all manner of secrets.

Both Lenz and Soitch were being closely

guarded, although no attempt had been made on their lives so far. All the measures that the police chief had taken might be seen as little more than passive ones. However, it was not in Arno's nature just to sit by and wait for fair weather. So as not just to be carried along by events, he thought up a move which, if successful, might well bear fruit. His train of thought was simple: if the criminal were using the ordinary postal service the police might just as well avail itself of the same service.

It was important to stop the infection spreading. In the old days streets and high-roads had been cordoned off to stop the spread of plague or cholera. In short, it was now essential to discover one of those cursed flowers in a letter that had not yet reached its addressee. If they did not manage to find the criminal, at least they would be able to forestall the blow being prepared for the next victim.

* * *

Seizing a free moment, Ron popped in to have a chat with Dan. It was during a short lull at the post office when the morning deliveries had been sorted and the afternoon ones had not yet been brought in.

In the sorting cubicle it was cramped and Ron sat down on the table, as was his habit, moving over to one side thick tome marked: *Manual for Post and Communication Staff*.

"I was reading a fantastic story yesterday!" Ron began, swinging his legs to and fro. "At last

science fiction writers've got as far as us."

"What, you mean to say they've sent some post office employee off to Centaurus? Or perhaps farther still?" suggested an acrimonious Dan.

"Wrong both times. The action takes place on Earth: some creatures land on our planet on flying saucers, they're rather like slugs and they've planned to conquer Earth. But our gravity is too strong for them and they can't move. So what do they do next? I bet you'll never guess."

"I'm not going to waste time on something stupid like that."

"They decided to use the post!" declared Ron triumphantly. "They got hold of one of those manuals like the one over there and managed to rustle up some paper and envelopes. Their plan went like this: people would receive the letters and then open the envelopes. There would be nothing inside the envelope except a clean sheet of paper. The recipients would just shrug their shoulders and throw out the paper. Then the most interesting part of all would come. The paper is impregnated by the slug visitors with a special chemical solution. Once the envelopes had been opened the solution would be released and then would form an infinitely fine chemical film high above the Earth. Over each area where such paper was discarded, this film would form. The idea of the slug invaders was beautifully simple. The patches of film over various sections of the earth's surface would eventually join up one with another until the whole of Earth would be enveloped in a single

bubble of this film: it would form a shroud inside which all living things would perish. In fact that's the title of the story: *Operation Shroud*."

"Go on."

"The slugs scribbled addresses on to the envelopes, filled each one with the fatal paper and then somehow managed to drag them to the nearest post-box and drop them in. They wait a week, two, a whole month: what the deuce has happened? Life on Earth goes on as usual. Meanwhile, the slugs are all dying off one after another under the impact of our gravity. Finally, the last one dies without ever having found out why their wonderful plan failed."

"Poor chemistry?"

"No, not chemistry, but the postal service that you and I work for! It turned out that some letters got lost en route, others turned up at the wrong address and others still arrived late. As a result, there were gaps or holes in the 'shroud', and the whole scheme hatched by these strange creatures collapsed. You see how much we owe to the post office. And people are always complaining..."

"Yet, it saved human life as we know it."

"There's a story worth reading! "

"You're always stuffing your head with nonsense, Ron. We've got a real chance to win a bonus and here you are spinning ridiculous tales again."

"A bonus?" asked Ron, pricking up his ears.

Dan handed him a special instruction sheet, explaining that it had arrived that morning.

Ron took it with misgivings, expecting yet

another practical joke.

“So you see the violet mania has got this far,” said Dan.

Now this did not look like a joke. In the right-hand corner it was stamped SECRET, and all postal sorting officers were instructed to check all letters, packets, etc. to see if they contained violets.

Ron put down the hand with the instruction sheet into his lap. “How are we meant to look for this violet though? Open every letter—it’ll mean no end of work. Then what about privacy of correspondence?” added Ron, puzzled, scratching his forehead the while.

“Read the rest,” said Dan.

Ron read the remaining instructions. “It’s clear,” he said, “we’ll have to examine the letters against strong light, as the farmers do when they’re checking eggs before sending them into the city.”

“And the same applies to every letter.”

“Never mind. But just think, if you do find a flower there’s a bonus waiting. I must get back to my own cubicle now, the post’s come in, I believe,” added Ron, in a hurry to be back to work.

From that day onwards more work than usual was demanded from the post-office workers. However, it did not lead to spotting any people, who sent out violets in their letters.

Ron’s new tasks became purely routine: he would insert letters into the slot of a machine and then look at them on a screen. All of a sudden, Ron’s heart missed a beat in excited anticipation: a dark patch showed up against the

background of a folded letter. There it all was—stalk and petals: there could be no doubt that it was a flower. Was it a violet? And if it wasn't? He thought for a moment, cautiously fingering the thick envelope. It was a pity to part with the prospect of a bonus. Then Ron had a wonderful idea. A few moments later he came into Dan's cubicle. He stopped at the door with one hand behind his back. Dan was on the same work as all the other sorters—he was screening envelopes.

"Well, what can I do for you?" asked Dan, looking up from his work: "Have you come to tell me a new slug adventure? I've got no time for that now."

"I've got a letter here complete with enclosure," said Ron, waving the letter at his friend from a distance.

"A violet?"

"I hope so."

"Let's have a look," said Dan, stretching out his hand.

"Don't be in so much of a hurry. It's my find."

"Why then did you come along here?"

"Buy it," proposed Ron.

Dan caught on to what he wanted at once and then inquired if there was a sender's name and address on it.

"There is one," replied Ron.

"A fake most likely..."

"Possibly. You're not buying the sender's address, but the flower," Ron pointed out with sound logic.

"O. K.," agreed Dan, who had always enjoyed a game of chance. "How much do you want for it?"

“Half the bonus.”

“A quarter,” countered Dan.

They finally agreed on a third. Both of them were pleased with the deal. Ron had no regrets; he had always preferred a bird in the hand...

Five minutes later the criminal investigation squad was working all out. While the text of the third letter was being scrutinized, police agents were sent to both the addresses written on the envelope.

It turned out, incidentally, that Ron had taken caution too far on this occasion, sure enough there had been a genuine violet in the letter he had singled out from the tide of post. When the bonus was solemnly awarded to Dan, he felt a right fool!

* * *

The letter had been addressed to the department store “All for All” for Linda Lago. The sender’s name and adress were: Amant Sato, Fourth Horizon, Street 10, Needle House. The number of the flat had also been indicated. It was common knowledge that this three-hundred-storey house was inhabited solely by employees of Western Company.

Arno Kamp read and reread the text of the short note. It was an ordinary love-letter of the kind Kamp himself had written in his distant youth. After declarations of passion covering half a page, the as yet unknown Amant suggested to the “light of his life”, his “radiant dream”, his “auburn star” that they should meet next

Friday evening at eight o'clock at "the old spot".

But, perhaps, this lovers' twaddle was a sophisticated cipher? After a copy had been taken and the letter carefully examined it was put back in the envelope, sealed up again and sent on to the addressee.

"What if Linda Lago and Amant Sato were partners, members of a secret organisation?" Arno Kamp mused. There was something fishy about it all, anyway, since the letter had contained yet another of the strange violets.

The store "All for All" took up a whole block. It was a town in miniature, in which it was very easy to lose one's way. The hoardings boasted that it was possible to walk in there naked and come out again dressed from top to toe with everything a customer could possibly need, a point illustrated by the neon pictures flashing at each intersection inside.

Linda Lago worked in the department for space travel. Rich tourists would go there to buy outfits designed to cope with weightlessness, shoes fitted with magnetic stabilisers, self-aiming guns for hunting on other planets and other types of equipment for leisure pursuits in outer space.

When Linda managed to get rid of a rather tiresome customer and looked at her watch, it was already a quarter past seven. All the other assistants, who had been delayed like Linda, hurried over to the escalators. Talking animatedly amongst themselves they glided down to the exit. The electronic night-watchmen were already on the move in the various depart-

ments—cart-shaped devices moving along on pliable tentacles—the octodogs.

Linda lingered in front of one of the mirrors, and tidied her hair. She had started to dye it as soon as it began to go grey. That had happened a year before, when Arben, her fiancé, had died. That had been a very nasty affair bound up with experiments organised by the prominent scientist Newmore. Before he died, Arben had introduced her to Amant, a colleague of his.

She jumped quickly into the aerobus that was waiting at her stop, just as the air pressure began to build up before take-off and as the doors were starting to close. A young man, desperate not to lose track of Linda, pushed in behind her.

She was late, of course, and Amant was waiting. He was strolling up and down near the fountain, looking at his watch every now and then.

On meeting they exchanged a few remarks and then Amant took Linda by the hand and they walked slowly down the avenue. They talked for a long time and every word was carefully recorded on portable tape-recorders carried by the men who were walking alongside them in the street.

The detective in charge of the operation had long realized that something was not as it should be, but he had been instructed to arrest Lago and Sato, and, naturally, he could not go against Arno Kamp's orders. This was why when Amant had seen Linda home and they were kissing goodbye in the porch, a man came out of the shadows, made by the old-fashioned brick building, and announced in a low voice: "You're under arrest."

Somehow the muddle of that police operation got out and the papers started splashing the violet story all over their pages. Reporters revelled in the ordinary billet-doux in which the ardent suitor had enclosed a violet in order to enhance the expression of his feelings. All the details of the abortive police exercise were commented upon and any gaps in reliable information were filled out with conjectures and guesses.

The embarrassment of the Police HQ after that false step had several results. First of all, the instructions issued to postal employees were cancelled. As usual, things went too far in the other direction this time, and the bonus was deducted from Dan's salary, after which the ever-cautious Ron started to give him a wide berth.

The innocent flower became a symbol threatening if not the existence of the state as a whole, at least that of the police chief Arno Kamp, to whom the President conveyed his displeasure via a third party.

Soon afterwards chemists, on thier own initiative, started putting violets instead of the traditional skull and crossbones on the labels of their poison bottles, and the hit-song that spring was one about a girl, who, after accusing her lover of betraying her, demanded that he kill her, after first sending a letter containing a violet.

Clearly enough, Arno Kamp had originally thought he was up against just an ordinary case of blackmail, albeit a skilfully planned one. His hunt for the letter-writer soon lost any real direction. Usual police methods that as a rule

reaped results, were now taking him down blind alleys with alarming frequency.

At the end of April the police chief was summoned to see the President. As he flew to the presidential palace and then walked through the endless series of check-points, Arno Kamp attempted to put his thoughts in order and concentrate on what he was about to report. The violet hunt was getting nowhere. Huge numbers of men in his department were marking time. The unusual nature of the demands made by the unknown blackmailer continued to amaze him. In the long years of his work in the police Arno Kamp had grown used to the idea, far from flattering to the human race, that the actions of ordinary people, and the logic behind criminals' thinking—and Arno Kamp saw any member of the human race as a potential criminal when all was said and done—were basically simple and could in general be explained by some sort of profit-motive: either the chance to get hold of large sums of money, or to achieve promotion, or other ambitions of a similarly blatant and tangible kind.

In the violet case, however, all the standard methods for crime detection that Arno Kamp had evolved over the years had proved useless. To start with, Kamp was unable to lay his finger on the advantage which the unknown criminal (or criminals) could hope to gain from their mass-scale blackmail. Money? Impossible, since neither Hugo Lenz nor any of the other "violet-victims" had been asked for money in the anonymous letters. Promotion? At one time Arno Kamp had actually favoured the point

of view held by Arthur Bark, that Doctor Lenz's assistant cherished the dream of taking his present chief's place and had sent him the letter to that end. As for the other letters, they, according to Bark, had just been sent to provide camouflage.

Unfortunately, however, Arthur Bark's solution had been proved wrong. The most thorough investigation had not provided any evidence that could incriminate Doctor Lenz's young assistant.

With sagging spirits Arno Kamp went up the escalator in the President's palace. His thoughts kept returning to the ill-starred violets, the first of which had arrived on Doctor Lenz's desk early one April morning not so long ago.

If money and promotion provided no plausible motives, was it a woman, perhaps? Perhaps jealousy of an unfortunate rival had been the reason behind the letter to Lenz? Investigation, however, had shown that this approach was also leading nowhere. Hugo Lenz loved his wife and was faithful to her. Not only did he have no mistress, but there were not even any passing affairs to look into. As for the rapturous notes and declarations of love from the famous physicist's young female admirers, they were always of the one-sided variety.

There was, however, still one motive that might serve to explain the behaviour of the letter-writer—the most straightforward of all, which had been expressed in the clearest of terms in the letters: concern for the future of mankind. Yet Arno Kamp did not regard altruism of that kind as something worth taking

seriously. The fate of mankind: it just did not hold water. Scratch away at the surface a bit and under the most high-flown of sentiments there were bound to lie selfish interests. But no one seemed to be able to scratch at the surface...

The President greeted the chief of police in sombre mood. He did not get up from his desk, but merely gave Kamp a curt nod while continuing to look through some papers.

During the long pause that followed, Kamp thought to himself that however ineffectual the little old man in the grey suit might look, so much power was concentrated in his hands that he could dispose of him, Arno Kamp, in a mere instant...

"Why are you still standing? Sit down, my dear Kamp," came the President's icy greeting as he looked up at last from his papers. "What news?"

"We have carried out thorough..." Kamp began.

"What I want to know is: who sent that letter to Hugo Lenz?" interrupted the President.

"The author of the letter has not been tracked down yet."

"I'm not satisfied, Kamp. Your department costs the republic a good deal, and therefore I expect it to be a little more useful. Perhaps you don't set enough store by your present post?" the President went on and Kamp's face fell. "Quite apart from the fact that subversive elements are daring to threaten the country's leading physicist, there is a good deal more at stake as well. Hugo Lenz can, I suppose, be regarded as some kind of figure-head. How many

letters with violets have been registered in the past week?

“Eighty-four.”

“To whom were they addressed?” The President then came out with a whole string of short, direct questions, as if he had prepared them and learnt them off by heart in advance, and Arno Kamp had the feeling that the whole thing smacked of a well-rehearsed play. But who was doing the directing?

“Here is the list.” Kamp hurried to open his brief case, but the President stopped him with an impatient gesture.

“We’ll look at papers later. What kind of people predominate in that list?”

“Scientists. Physicists.”

“You see. Physicists!” the President cut in angrily.

“Sometimes the blackmailer, in order to put us off the scent ... or, perhaps, it’s just coincidence...”

“D’you realise what you’re saying?” shouted the President, beside himself by this time. “The Nuclear Centre is on the brink of a major discovery. Its work must not be disrupted. The Western Company has been put out by this...” The President started to cough after that outburst and wiped his mouth with a handkerchief.

“So that’s where the directing is coming from! The Western Company has been put out, has it?” Kamp noted to himself. The chief of police knew a great deal, but not everything. For a start, he did not know that vital information connected with the splitting of quarks had mysteriously made its way through the impenetrable

walls of the Nuclear Centre into the hands of the Western Company.

The arms industry was always hot on the heels of the scientists. As soon as some even vaguely significant discovery had been made, the ubiquitous tentacles of the arms manufacturers would start to stretch out in that direction. They knew full well that the substantial expenses involved in producing new types of weapons would pay for themselves a hundred times over. The Republic was waging a long exhausting war, which, although it was referred to in official documents as a "minor" one, was devouring resources on a far from small scale.

Arno Kamp, by no means an unintelligent man, realized from this latest audience that if the President had mentioned the Western Company in the course of their conversation, it meant that things looked black for him, Kamp. When do people come out into the open? When they have all the trumpcards in their hands. There was one thing for certain, and that was that the case had to be settled as quickly and as resolutely as possible.

* * *

Exploitation of the seas and oceans that covered the bulk of the earth's surface promised mankind untold benefits. The sea was a truly inexhaustible reservoir in which there was room for both plankton and whale. Many chemical elements essential to man were to be found in sea water—sometimes more of them, sometimes less.

Soitch's work. He had even managed to ferret out the fact that the most dangerous moment in drilling work comes about two years after work starts. And that was a secret which Soitch hoped was known to no one but himself.

Perhaps the letter had been the work of some competing firms? Or, alternatively, it could have been sent by the fishermen from the village near the shore. Whoever it was he would not let them stand between him and the work in hand—that he was determined to complete. Later, once the giant well came into commission then he could relax.

It would be nice to buy a sputnik on some distant orbit and get away from all the stresses and bustle. A large one, of course, with all mod cons, including a landing platform for personal rockets.

Then, of course, there would have to be conservatory. Cultivating tulips in weightlessness had been a long-standing dream of Soitch's.

Even now, sitting in a tiny room with metal walls that kept being shaken by the automatic machines working away relentlessly all round him and buried under several miles of earth and water, Yves Soitch seized on a brief moment of leisure, when work was going smoothly and no one was bothering him, to indulge in his favourite dreams.

* * *

Spring comes early in the Rocky Mountains. The patients at St. Bartholomew's Clinic, an-

xious to make the most of the first really warm day, left their wards and started strolling about the grounds.

Two of them, picking out a bench by the entrance to the grounds, were arguing in a leisurely fashion as to whether nuclear-powered or ordinary hearts were to be preferred.

"It's funny there's no sign of Aurea Dervie today," remarked one of them, screwing up his eyes in the April sun.

"She'll be here, don't get worked up. Look, there she is, talk of the devil!" commented the other.

A small airbuggy landed on the green lawn, and out of the hatchway sprang Aurea Dervie. The clinic's senior surgeon ran over to her, swinging his arms about.

The two men on the bench fell silent. They craned forward trying hard to catch what the surgeon and the Director of the Medical Centre were talking about, but the two doctors were talking quietly and the pair on the bench could only catch separate words.

"She's as beautiful as a goddess," sighed one as Aurea Dervie disappeared from sight.

"As a mannequin," the second man corrected him.

Aurea Dervie knew that behind her back she was referred to as a demi-robot. She did not let it show, but that nickname hurt her.

She had been a sickly creature as a little girl. There had hardly been a disease that had passed her by, from ordinary measles and scarlet fever to a rare form of tropical fever, although she had been living with her parents in the North.

Her father had been most well-to-do; her parents had worshipped their only child and spared no expense for any medical treatment that might help. Young Aurea was fitted out first with nuclear-powered heart, then artificial kidneys and lungs. Realizing now that people were in part right when they nicknamed her demi-robot, she felt even more distressed at the fear that she might be somehow inferior to other women.

She was in charge of the enormous network of medical establishments throughout the country. She had always had a soft spot though for this one particular clinic up in the Rockies. Aurea often visited the small complex of clinics, giving advice to the doctors, often operating herself, if there was a particularly "interesting" case to be dealt with.

St. Bartholomew's had rather awesome associations, for it was there that malfunctioning organs—hearts, lungs, or kidneys—were replaced, more often than not with artificial ones. At the same time, the implications of this drastic medicine were rendered less frightening by the knowledge that Aurea Dervie was a surgeon of rare skill. "It's no ordinary hands she has, they're cyborgised precision instruments," idle tongues would comment.

On one occasion a military plane had crashed during testing and the whole crew of six had been killed. When the twisted cockpit was eventually forced open, she had been confronted with a hideous tangle of blood-stained bodies. She had managed to "patch" the dead men together again, albeit with recourse to artificial organs.

After that Aurea received an official vote of thanks from the military department concerned and the gossips left her in peace for a while.

Hugo Lenz felt rather nervous as he flew in over the Rockies. When the white boxes of the clinic down in the valley came into view and the autopilot announced: "Coming in to land at St. Bartholomew's Clinic," his heart started to beat quicker than usual.

He had heard a great deal about Aurea Dervie. Reports of this unusual woman varied a good deal. He took comfort from the fact that any outstanding man or woman invariably becomes shrouded in a mist of legend already in their life-time. Looking down at the jagged peaks, Lenz could not help thinking of the night when he had resolved to make Dervie's acquaintance.

Aurea was surprised to meet a pale man walking over towards her with a smile. He was obviously not a patient—she always remembered any patient, who had ever been through her hands, perfectly clearly.

"Good morning, Doctor Dervie," said the man as he came up to her.

"Good morning," replied Aurea, stopping in her tracks. "Where had she seen that Assyrian beard and the burning eyes before?" she wondered.

"You're probably here in connection with a transplant," she went on, breaking his silence. "You need to go and see the senior surgeon."

"It's you I want to see," Hugo Lenz said, and then introduced himself.

...Day was ending. Engrossed in their extraordinary conversation the two of them didn't notice

that it had grown dark. Then, Aurea switched on the light.

"Everything you've been telling me is very interesting," said Aurea Dervie, "and very strange at the same time. Surely you don't believe that people ought to turn their backs on cyber-gisation. As I see it, it's the shortest route to immortality."

"Immortality ... and what for?"

"You don't need me to tell you that," exclaimed Aurea Dervie. "Surely the attainment of immortality has always been man's most cherished dream?"

"The important thing is not to attain immortality, but the price we would have to pay for it," objected Lenz, lighting up his next cigarette. "After all, anabiosis is also life of a sort. But would you be prepared, for instance, to spend a thousand years preserved in a tank for the sake of the dubious pleasure of dragging on your existence into the next millennium?"

"You really take a rather one-sided view of things," countered Aurea. "Surely one should never disregard a factor such as the accumulation of human experience? Don't you see it as tragic when a man departs life at his very prime, taking with him to the grave experience and knowledge that it will take others perhaps decades to piece together again bit by bit?"

"I'd like to remind you of a book," Hugo Lenz went on, tapping the ash off his cigarette as he spoke. "It tells of a country in which on rare occasions immortal beings were born. They were known, I think, as Struldbrugs. They were singled out from other men by a mark on their

forehead, which told everyone that before them was a person condemned to life without end, to immortality. Magnificent, might be our reaction? Surely immortals like that would be an honour to any state, a pillar of society, a moral plumb-line? Should they not be a repository of knowledge accumulated by mankind or represent a living embodiment of history? But in practice everything turned out very differently. The author of that old book tells us that the immortals enjoyed the least esteem among their fellow-citizens, and, in fact, were more deeply despised than all other men. As the years went by, they became intolerably plaintive and boring; they lost their memory and were denied an active part in the life of society. . In this way he showed us that immortality in practice degenerates into old age without end."

"It is to us that the people who need miracles come. In fact, this place is called the miracle clinic..." Aurea stopped, hunting for words.

"Aurea Dervie's miracles," said Lenz, to round off the sentence.

"But what brought you here?" Aurea asked, laying great weight on the word *you*, "Surely not just..."

"Just one thing: the hope that you might give up miracle-working," Hugo Lenz said slowly.

"Impossible," said Aurea Dervie, shaking her head. "I've explained already."

"You're in charge of the Medical Centre."

"That's not the point. Organ replacement is the sign of the time."

"That's just words," commented Lenz, wav-

ing his hand in dismissal.

“No one can hold back the march of progress.”

“But they can try,” persisted Lenz.

At that point Aurea found herself thinking that the eminent physicist was perhaps out of sorts. Perhaps the threatening anonymous letter that everyone was talking about had upset him?

“All right, I’ll think over what you’ve said, Doctor Lenz,” she said. “But I have a proposal to make to you in return: why don’t you stay up here a bit and take a closer look at the miracles that you dismiss so wholeheartedly. They say that the air up here is very beneficial.”

“I understand, Aurea Dervie,” said Lenz with a smile. “My unfamiliar proposal brought you round to the idea that I was not in my right mind. I assure you that I am in perfect mental health.”

“But, Doctor Lenz...” Aurea began.

“Let’s regard this discussion as unfinished,” interrupted Lenz. “I hope to come back to it and bring you round to my point of view.”

* * *

After shaving very carefully Arthur Bark took a long time choosing a tie. Amazingly enough he had invited Shella to go with him to the theatre that evening and she had agreed. Was it promptings of the heart or just official business? Arthur laughed to himself as he asked the question of his reflection in the mirror.

Shella probably had caught his fancy, but no less important was the need to sort out the si-

tuation that had developed at the Nuclear Centre. Could one of the staff have written that letter to Hugo Lenz? And if so, who?

So far Bark had no foundation for an answer to the riddle or even hints at one and he was beginning to get seriously worried. He realized that if the case dragged on much longer, things could backfire for him. He would have nothing else open to him but to point an accusing finger at Imant Ardonis, Lenz's first deputy.

Bark had tried on several occasions to set cunning traps for Ardonis but the unruffled Imant had avoided them with no difficulty at all.

"A slippery customer," thought Arthur as he knotted his tie, and then stopped himself short with the reminder: objectivity before all!

Antipathy was one thing, but what he needed was facts. "A policeman has no right to build a case on sand, even on the sand of intuition," was one of Arno Kamp's favourite adages that came to mind all of a sudden.

Talking of the chief though, he had been behaving strangely of late. For a start he had installed twice as many security devices at HQ. Then although he did not seem to have abandoned his democratic leanings, for he still continued to use public transport so as to learn first-hand what the people "felt", he never went about on his own any more. Jules had told him that the old fellow had given instructions that wherever he went, whether out in the street or underground, he should be covered by agents in plain clothes. Jules was sure that Kamp too had received a "violet" letter.

Bark thought that it was highly likely. After all policemen were just people, and were liked a lot less than most.

Arthur had hoped that outside the work context Shella might prove more talkative. Through her contacts with all the other staff in the role of Lenz's secretary Shella obviously knew a great deal. She had perhaps caught snatches of conversation which might give Arthur that all-important lead, or at least something to follow up.

The two young people met, as arranged, at the theatre entrance. There was a little time left before the play began. Arthur found Shella a couch in a modest corner of the foyer and they sat down. Contrary to habit Shella was chattering away without stopping. Arthur carefully tried to steer the eloquent flow in the right direction, to get her onto the subject of the Nuclear Centre. However all his efforts triggered off was a eulogy on Don Basilio: how clever and well-behaved he was, how amusing he was, how he worshipped Doctor Lenz, would only eat from his hand and held the rest of the staff in contempt.

"And what if Don Basilio were not a cat but some electronic device?" asked Arthur, taking even himself by surprise. "Nowadays, you know, programming simple reflexes presents no problem."

"Have you worked in biocybernetics at all?"

"A little," went on Arthur. "Imagine for a moment that the cybernetics experts had made a device capable of miaouwing, lapping milk, and showing preference for one specific person.

The device was given cat shape and colouring and there you have it: Shella just as fond of the cat, as it is of Doctor Lenz."

"Anyone could tell that you're just a novice at the Centre," commented Shella. "D'you really think that the security officers at the Nuclear Centre would not have foreseen such possibilities? No mere robot could make its way into the grounds of the Centre. You've seen the security filters they've got..."

The foyer was gradually filling up. Theatre-goers were walking up and down waiting for the play to begin.

After a pause, Arthur started up: "One person who really knows where he is going is Imant Ardonis."

"Where he's going I'm not so sure, but he always knows where other people are going. That's for sure," countered Shella, straightening the bag on her lap.

"Other people?" inquired Arthur in as casual tone as he could muster.

"Ardonis is always poking his nose into other people's business," Shella explained. "He's ready to interfere in any experiment, with no thought to the man in charge of the whole thing."

"But if Doctor Lenz is carrying out an experiment, I can't imagine that Ardonis would make so bold as to..."

"Oh, yes he would," interrupted Shella. "You don't know Ardonis. There's nothing holy as far as he's concerned, no authorities exist for him. All he takes seriously is physics, and nothing else. And he behaves as if he knew more than Doctor Lenz himself."

“Perhaps that’s right,” ventured Arthur provocatively.

Shella looked at Arthur as at a man who had just made a ridiculous assertion.

“Imant Ardonis is a fanatical scientist, it’s true,” she said thoughtfully “He can sometimes stay in the lab for three days on end without sleep, getting by on coffee, if he’s engaged in an important experiment. I’ve heard that he’s dreamt of revolutionising physics, of being the first man to split quarks. But why incidentally are you interested in Imant Ardonis?”

“Ardonis means nothing to me,” said Arthur with a shrug of his shoulders. “If we’re on the subject of personalities, I’d like to know more about Lenz.”

“You won’t find a better man! ” said Shella with conviction. “When you’ve been working with us for a bit, you’ll see for yourself.”

A protracted chord of music rang out and the curtain formed by hologram disappeared at once as if into thin air. A castle on the sea-shore appeared on stage. Large waves were beating on the rocky shore so realistically that Shella felt a shiver ran over her: it was as if she had really felt a puff of fresh wind smelling of salt and seaweed. There was a path leading from the castle down to the sea. A man in a flowing cloak appeared at the far end of it. Applause greeted the well-known tragic actor who now took the stage.

“I adore Hamlet,” whispered Shella, looking eagerly through her opera-glass.

Arthur looked absent-mindedly over towards the stage. He felt satisfied with the beginning of

the evening. So far everything was going according to plan. At any rate he had every confidence now that Shella would tell him all she knew about Doctor Lenz's colleagues and then he could work out where to go next.

When the ghost of Hamlet's father appeared, Shella reacted in a strange way. With a sigh she pushed her opera-glass into her bag and even in the dark Bark could see that her eyes were glistening with tears.

"What's the matter?" asked Arthur during the interval.

"The ghost reminded me of a very sad incident," said Shella.

"Tell me about it," asked Arthur.

"Another time," replied Shella.

During the interval Shella was not talkative. Some far from pleasant memories seemed to be running through her pretty little head. Indeed Arthur's hopes of important discoveries were shattered.

"I hope we'll be friends, Shella?" he said just before taking his leave.

"You're over-confident, just like Don Basilio," laughed Shella.

The first person Arthur met when he arrived at the Nuclear Centre the next morning was Ardonis. Bark greeted him but all he received from Imant in return was a curt nod, and no proffer of a handshake. Doctor Lenz's deputy looked worried.

"You just wait, dear friend, give us time. I'll bring you to earth yet," thought Bark to himself, watching Ardonis as he walked away. Imant held himself erect, without swinging his

arms—a typical sign of an introvert. Bark recalled Shella's words of the day before about his dream of revolutionising science. He might well be planning to erect his castle in the air on the grave of his present superior. There was no mistaking people like that; they were always sticklers for tidiness, and dandies. They would always try to get others to do the tough work, they would never roll up their sleeves and get on with the rougher jobs. To be honest Bark was slightly envious of Ardonis.

When all was said and done what could be more vile than tracking down suspects, the detective's trade. But it was no easy matter to back out of the police force nowadays. He could have made a decent physicist. Not just anyone had said that, but Doctor Lenz himself. The scientist's words had taken the police agent by surprise and he often thought back to them.

"There's no justice on this earth," concluded Arthur, and with a sigh he set off to the neutrino laboratory.

That day Bark decided to stay on after all the others had left at the end of the day. He was worried lest Lenz decided to stay on till after midnight, or worse still stay on in the Centre till morning, as sometimes happened, particularly of late. Luck was with him on this occasion.

Imant Ardonis was the last to leave. Arthur wandered about the deserted laboratories. The generators were whirring away, pale blue streams of light flickered across the oscillographs, the automatic installations continued imperturbably with their various tasks and Arthur felt aware

of how superfluous man's presence down here had become. Yet, quick on the uptake as he was, Bark also realized that his reaction was one of ignorance, the reaction of someone who knew not the first thing about nuclear physics.

When he went into the room where the accelerator stood his path was blocked by two automatic barriers crossed one over another.

"Employees must not enter," warned the recorded voice.

"I have Doctor Lenz's permission," said Arthur, and he then pulled out a special pass and when this had been photochecked the two bars were drawn back into their sockets to let Arthur move forward into the main hall.

He looked over the desks of the employees, checked through all recent recordings made and rummaged through the waste paper baskets, straightening out and reading every piece of scrap paper he came across.

Then he went into Imant Ardonis' office. A check round revealed nothing. Arthur hoped vaguely to find some piece of evidence like a rough copy of the anonymous letter addressed to Hugo Lenz, or something of that sort. Yet Ardonis appeared to have destroyed everything that might have appeared compromising.

After working through the contents of Imant's desk, Bark came across a cassette from a biorecorder: cartridges of this type had come to replace ordinary notebooks. Without a moment's hesitation Bark slipped the spool into his pocket.

Later on the way home Bark could not help thinking of Shella. There was something undeniably attractive about her. Perhaps that enig-

matic air? Bark sighed: it looked as if for Shella no other man but Lenz existed. Yet he, it seemed, did not even notice his secretary.

Bark had learnt that Shella had worked in the Western Company at one time and then, for some reason not yet clear, had joined the Nuclear Centre. Perhaps so as to be nearer to Doctor Lenz?...

After reaching home Arthur remembered the spool from Imant Ardonis' office and he placed the hexagonal spool in his own biorecorder to play it back. He expected to hear all sorts of figures, formulae, calculations for graphs, an endless chain of y's and z's, of which he had already had an earful after four days at the Nuclear Centre. Yet the very first words gripped his attention.

"I can't understand Hugo's behaviour. It looks as if he's decided to stop halfway," declared Ardonis' unpleasant voice loud and clear across the room. "The Huguenot himself doesn't mention it, but I'm used to decoding his unspoken thoughts."

Bark turned down the volume.

"Stop halfway? Throw over, rule out experiments that are in sight of their goal? It's monstrous," protested Imant's voice in an indignant rush. "The bombardment of quarks that we had almost completed was to have brought down the last bastion erected by Nature on the path to our true understanding of matter.

"Someone who knew Lenz less than I do might think that the Huguenot has taken fright before this last step, before the chain reaction that might start up. But that was all eye-wash.

No, there had to be something else, but what? To hell with Lenz. Those quarks had to be split, nothing else mattered. I'll finish the work alone."

The voice fell silent. Then came some singing: horribly out of tune, Ardonis was humming the topical song entitled: "I'll send you a violet."

"So no one will stop you, will they," said Bark bitterly as he hid the spool carefully away. "Oh yes, we will, my friend! "

Now he must hurry to see the chief. It did not matter that it was in the small hours. Arno Kamp had given instructions for news connected with the violet case to be reported back to him at any time of night or day.

Listening to the spool put Kamp in a good mood. "An important piece of evidence," he repeated several times, patting the cartridge. "Subtle, very subtle..."

"Shall we go on watching Ardonis?" asked Bark.

Kamp thought for a moment and said: "It's dangerous to leave him at large. But we shall have to tread very carefully."

"Perhaps Ardonis has accomplices..."

"Possibly. Our next step must on no account put the wind up them," Kamp went on. "I'm starting to put a plan of action together. We'll get our hands on Ardonis, and then he's bound to open up just like a flower for the bees. By then the violet case will be sewn up once and for all."

For some time Imant Ardonis had noticed that he was the object of someone's vigilant attention, and of a rather unpleasant variety what was more. He admitted to himself that this might just be an unfounded suspicion, or a flight of fantasy at this stressful time, since he had been working under more pressure than usual recently. He no longer took everything Lenz said on trust and used to double-check all the chief's recommendations, either with recourse to the calculator Lucinda or even with pencil and paper.

It was no time however to lose his cool. Imant Ardonis tried to keep his nerves under control. In all minor confrontations he remained controlled, polite and aloof.

One Sunday when he was walking in a small square Ardonis joined a long queue at a soda fountain, as the sun beat down mercilessly. In front of him a woman suddenly cried out, and there was some confusion. Ardonis had hardly had time to realize what was happening when some individual dashed past him and without other people noticing pushed a woman's bag into his hands. As a reflex action Ardonis gripped hold of it, and that very same moment the portly woman in a hat seized hold of him, shouting: "Thief, thief! My bag! "

A crowd quickly clustered round. In any town there are always people with nothing to do to pass the time, ready to gape at any spectacle, and particularly on Sunday. It was in vain that the somewhat flustered Ardonis tried to prove that it was all a misunderstanding.

The police robot, with whom it was no good arguing, stood there unperturbed listening to both parties' stories, and recording the evidence of voluntary witnesses. He then made a quick check of the bag's contents and confirmed that it did indeed belong to the noisy lady. Then after politely touching its cap the robot handed Ardonis over to other two robots, who scampered in sprightly fashion out of the car that drove up at a signal.

Hugo Lenz tried to get his deputy set free after he had been caught up in that unfortunate affair. He had several meetings with Arno Kamp in order to explain that it must all have been a misunderstanding.

"Well, let's sort things out, my dear Doctor Lenz," the police chief would say in unruffled tones in response to his requests. Then in a playful tone he might go on to ask: "And how do you feel at the moment? You look paler than usual today. Has anyone been bothering you?"

"Not yet," laughed Lenz ironically.

"How much time is still allotted you?" Kamp asked during one of his visits.

"Another month."

"A whole eternity."

"Somewhat less!" Lenz corrected him.

"Never mind," said Kamp, assuming a serious tone this time. "It seems we're getting some kind of leads at last."

"You don't say!" exclaimed Lenz, pricking up his ears. "What kind?"

"That's still a secret."

"Even from me?"

"Even from you, my dear Doctor," confirmed

the police chief, shrugging his shoulders.

“But surely I am what you might call an interested party! ” cried Lenz.

“That’s all the more reason,” explained Kamp. “And as for your deputy, don’t worry about him. He’s in good hands.”

* * *

“What’s happened, Doctor Lenz?” asked Aurea Dervie, almost before Hugo had crossed the threshold of her office.

“Why?” asked Lenz in bewilderment.

“Just look in the mirror.”

Lenz gave a tug at his beard and said: “You made your diagnosis last time: overstrain.” Then he sat down on a chair in the corner.

Aurea Dervie shook her head and asked: “Are you really taking this business with the violets seriously?”

Aurea Dervie’s question made Lenz lose his patience once and for all and he said abruptly: “Yes, I take the whole business very seriously. If you must know, I’ve only got three more weeks to live.”

At that Aurea was robbed of words for an answer.

Hugo wiped his hand across his forehead and asked all of a sudden: “And what would you think, my dear Aurea, if you had received such a letter?”

“I whould have published a letter of thanks to its author in the press,” she replied.

“What for?”

"For the flower of course."

"But seriously?"

"Seriously?" mused Aurea in pensive mood. "But what might the author of the letter have demanded from me?"

"Let's imagine that the demands were more or less the same as those put to me," suggested Lenz as he lit up a cigarette. "That is of course in relation to the field in which you work. Suppose you were asked to forego all organ replacements."

"More than likely I would have refused," said Aurea thoughtfully.

"Even when your life was at stake?"

"Even then," answered Aurea, looking Lenz sternly in the eye.

A screen opposite Aurea Dervie's desk lit up and a worried surgeon in a white coat looked out at her.

"I know, I know..." Aurea interrupted him as she rose to her feet, "I'm just coming."

The screen went dark, Aurea Dervie turned towards her visitor and said: "You know what? Why don't you come on my ward rounds with me. Then you'll come face to face with our work so to speak. What you know so far is all hearsay. That's why you've got such a false picture of this remarkable work."

The ward rounds took a long time. What Hugo Lenz saw in St. Bartholomew's Clinic stunned him. "Aurea Dervie's miracles" far outstripped anything even his lively imagination had envisaged. He had expected to see a good deal, but achievements as mind-bending as that, no...

Lenz walked along with Aurea, with the senior surgeon tripping alone behind. He in his turn was followed by a whole retinue of doctors clutching in awe-inspired wonder at every word coming from Aurea Dervie's lips.

In the first ward that they went into Lenz was immediately taken aback to see that there were no beds. He almost asked where the patients were but then decided to wait.

In the middle of the room there was a cumbersome installation that reminded Lenz of a neutrino gun. Aurea Dervie walked over to it and worked some magic at the control panel. All of a sudden a cry, a plaintive baby's cry cut through the silence of the ward.

"Just you cry for a bit," said Aurea. "Crying develops the lungs."

She checked carefully through the readings of the various instruments and then said something to the surgeon, who at once made a note in his records.

With a nod in the direction of the installation and in a whisper Lenz asked a young doctor standing nearby: "Who's in there?"

"You can hear, it's a baby," replied the doctor without shifting his gaze from the installation in question.

Meanwhile the crying had died down. "Where's its mother?" asked Lenz.

"It hasn't got a mother," said the doctor casually. Then looking at Lenz he decided some explanation was required: "The child has been developed from a cell in the biochamber."

Aurea Dervie put her ear up to the oscillating membrane at the side of the installation.

"Quiet!" hissed the senior surgeon and the young doctor fell silent.

There were three patients in the next ward. Lenz found though that he was stretching a point calling them people... There was something like a manipulator-robot over by the window complete with a man's head and flame-coloured hair.

"How d'you feel?" asked Aurea Dervie.

"Thank you, better today," answered the head.

"He's already learnt simple movements," chipped in the senior surgeon.

"So soon you'll be able to walk about independently," said Aurea in an encouraging tone, and the head smiled.

"Out in the fresh air?"

"First you must learn to get around the ward," said Aurea, as she walked over to the second patient.

At a white table in a vacuum chamber there lay a narrow parallelepiped made of some kind of porous material.

"Here, if you please, we have a copy of a human brain," Aurea explained to Lenz. "The man had an incurable illness and for a long time covered up his disease, so that things were too late when he came to the clinic."

"Who was he?" asked Lenz.

Aurea told Lenz his name.

"You mean the well-known composer?"

She nodded and went on: "When the patient was brought here in an unconscious state, he only had a few days to live. We did everything humanly possible, but surgical intervention was

no longer of any avail. So then we recorded the information contained in his brain, into this memory device. Believe me, it wasn't easy—fifteen thousand million cells! But now we shall be able to some degree to restore for mankind an outstanding composer.”

“So you'll develop an exact copy of the man who died?” asked Lenz in amazement.

“Unfortunately it isn't an exact copy,” Aurea said. “His body was struck down by a fatal disease and our attempt to restore it as it was would lead to an agonising death. There's nothing you can do about it, we have not yet learnt to cope with the irreversible.”

“In what form will you restore him to life?” asked Hugo Lenz.

“Did you notice the tower in the valley as you were flying here?” asked Aurea Dervie.

Lenz nodded and she went on, pointing to the parallelepiped: “The tower will be his home and when we switch the copy of his brain into the amplifiers, it will be able to function exactly as the dead man did. It will be able to read and dictate letters. Most important of all, it will be able to write music. But he will never be able, for instance, to walk through a park with a pretty woman, take a dip in the sea or eat a steak.”

“But is not thinking tantamount to being?” put in the head surgeon.

“And how long can he ... live ... in that tower?” asked Lenz.

“Virtually for ever,” answered Aurea Dervie. “The tower will become a source of music that is essential to men. Don't you think, Doctor Lenz, after all that we do deserve mankind's

gratitude for work like this?"

"Mankind's gratitude perhaps... But as to the gratitude of the composer ... of that I'm not so sure," concluded Hugo Lenz in subdued tones.

The other doctors in Aurea Dervie's retinue exchanged loaded glances.

On the bed—the only one in the room—there lay a young man of athletic build. He was listening attentively to what the doctors were saying and his eyes did not leave Aurea Dervie for a second.

"This was the most straightforward of all the cases," said Aurea, smiling at the young man, who responded with radiant gaze. Aurea looked at the readings from many electrodes attached to various parts of the sinewy body. She was pleased with what she saw.

"He was an astronaut," explained Aurea. "On the way back to Earth he was exposed to radiation somewhere in the region of Pluto. Fortunately he came to us in time. One after the other we replaced all his major organs, from heart to kidneys. The result you can see for yourself, Doctor."

"Tell me ... can I set out on another space-flight?" asked the young man in hushed tones.

"It's only up in space that you'll be able to live," replied Aurea Dervie. "Any weight will be your undoing. Your element from now on will be a weightless one."

In the same order the procession moved on towards the exit.

"Listen for a moment," said the young man.

"What is it?" asked Aurea with a frown, but turning back nevertheless. Everyone stopped and

the young man went on undeterred: "You see, here on Earth I have a fiancée..." He was talking in a jerky, agitated manner now. "She's waiting for me. Waiting... I know that from her radio messages... What will happen now?" he asked with a faltering voice.

"And can your fiancée live in a state of weightlessness?" asked Aurea.

"She hates it, can't bear it. Once before I went on my first spaceflight, we set off..."

"The best thing for you to do is forget her," interrupted Aurea in a gentle voice. "For ever."

"But..."

"You must understand you can't live in conditions of ordinary gravity, just as a fish can't live on dry land. Your natural environment is weightlessness and only weightlessness," concluded Aurea Dervie, turning to go.

They visited a large number of other wards, but after that it was the tortured eyes of the young man that kept haunting Lenz... After their tour of the clinic Aurea Dervie went to see Lenz off.

"So I haven't brought you round to organ replacement?" she asked.

"On the contrary, I'm an even more adamant opponent of your work now," he replied.

"We're saving people here."

"Saving them—yes, but at what price?"

"No price is too high for the chance to live," Aurea Dervie assured him.

"I'm not so sure about that," the physicist cut her short. By this time they were not far from Lenz's ornithopter.

"Can't I persuade you to spend a few days

at the clinic?" Aurea asked again. "Just for test. I give you my word, no one will pick up a scalpel."

"I'm absolutely healthy," said Hugo Lenz with a stubborn shake of the head, as he opened the hatchway of his craft.

* * *

By July 5th the whole of the country's police force was on the alert. The streets and squares were seething with people. Rallies kept starting up in one place or another. Yet there was no common ground for those who chose to harangue the public. Some demanded that everything possible be done to protect the physicist Lenz from any attack, while others believed that on the contrary the fewer scientists the world had the better and there was no need to make such a fuss over a physicist, even a famous one.

At the Nuclear Centre everything was going on as usual, as if this had not been the day Doctor Hugo Lenz was due to die.

On that day Lenz was his old self, such as his colleagues only remembered him from a good time back. His work progressed fast, he was laughing and joking, and even came up with a stupid little song about a violet.

After lunch Hugo Lenz took his deputy Imant Ardonis onto one side. They were talking about something or other for a long time. Not a sound could be heard through the frosted glass door. Would-be eavesdroppers kept walking up and down past the door, but could hear nothing:

all they could do was observe the two silhouettes against the pale glass, the one gesticulating wildly as if trying to convince the other, who only responded by shaking his head every now and then.

Imant Ardonis had been released from custody a few days previously, on condition that he divulge nothing in connection with his arrest. They had not got anything specific out of him despite an inquiry involving powerful apparatus, including one of the latest sophisticated lie-detectors. Arno Kamp had given instructions that Ardonis still be kept under secret surveillance.

The police chief reckoned that on the all-important day the potential criminal should be at liberty. It would be as well to let Imant Ardonis think that he was not suspected of anything. At the crucial moment the organs of justice would pounce on him and the crime would be averted. And even if not ... well never mind. Even if Hugo Lenz were to die, all the others at least who had been sent violets would be out of danger after that.

At the Nuclear Centre there was not a single employee by this time who had not been given police clearance. Arthur Bark did not let Doctor Lenz out of his sight the whole day.

When he flew home in the evening Lenz was seen off by a regular procession of people. The security ornithopters were skilfully and carefully camouflaged as excursion-, racing- or public-transport vehicles and heaven knows what else besides.

Kamp's men had been hard at work at the physicist's home as well. They had managed to

cover Lenz's house with a force field—a security dome like that at the Nuclear Centre.

The day went by and nothing happened. Lenz was safe and sound. Arno Kamp even thought for a moment, much to his shame, that the violet affair might have been one enormous joke or leg-pull after all.

* * *

In the middle of the night Arno Kamp was wakened by the ring of his videophone. He roused from his night's rest that had hardly begun and said in a voice still hoarse from sleep: "Kamp here."

"Agent 17 reporting. Hugo Lenz is dead," came the news over the air.

After discussing the possible causes of Lenz's death, medical experts were unable to come to any agreement. The facts were as follows: Doctor Lenz had died soon after midnight. No marks of violence had been found on his body. He did not appear to have been poisoned, although opinions on this account varied. At any rate no traces of any poison known to contemporary medicine had been found in the victim's body. They had concluded that his heart had not been able to tolerate the burden of tremendous strain to which it had recently been subjected. Other doctors attributed his death to the neurosis which had built up over the last three months. In support of their point of view, they referred to the superhuman tension resulting from living under a threat of death for 90

days, a real sword of Damocles. They pointed out that the terrifying waiting period had as likely as not undermined his will to live.

The President issued instructions for a commission of inquiry to be set up to investigate the circumstances of Dr. Lenz's death. Aurea Dervie, director of the country's Medical Centre, was put in charge of the commission.

Dr. Lenz's death, which had taken place at the time specified in the original anonymous letter, had an unnerving effect upon Yves Soitch. It meant, apparently, that the flower he had received was by no means an idle threat. Should he now go along with the demands made by the author of the letter, and abandon the work in Aquacity, before it was too late? And just freeze the drilling work?

Stopping the machines would be no problem, but then? All the fuss about the violets would subside and his rivals would seize upon the work he had got underway and then abandoned, and the chief geologist would be left looking a prize idiot. No, it was too late to retreat now. Even if he let the drilling schedule slip by even the tiniest fraction his project would still fail.

Then instead of his own little sputnik out in space he would have another constant companion—frustration at his own cowardice and his failure to seize at his chance of real success, the kind of opportunity that never repeats itself.

Not retreat but attack had to be his motto. It was vital to step up the drilling schedules as far as possible, and not worry about additional expense. He needed to get the drilling fi-

nished before the date of the death-sentence meted out to him in the letter. The sooner he reaped his reward, bought his sputnik and set off in it, the better. Then he would be out of the reaches of even the devil himself.

Out there in space he would have the chance to laugh at his earlier fears. He would set up his winter garden, that was for sure. He would make a point of growing violets in it too. Violets and more violets, just for the hell of it! Flowers grow well in conditions of weightlessness, they say... Fortunately he found it quite easy to adapt to it unlike some people, who could not stand as much as an hour of weightlessness.

A stiff timetable, reminiscent of war-time conditions, was introduced in Aquacity on Yves Soitch's instructions. Geologists, drillers, engineers, computer experts and nuclear scientists were not allowed up to the surface or outside the confines of Aquacity at all. Yves Soitch even cancelled the routine trips from Aquacity to the fishing village to get fresh fish. All in all he decided to put a stop to all direct contact between the men from Aquacity and the outside world, until the drilling programme had been completed.

He succeeded in obtaining the President's permission to isolate Aquacity once and for all. The director of the Geological Centre succeeded in convincing the gullible President that this deep-level drilling project was work of first priority which would lay the foundation for the nation's future prosperity and power.

From then on not a living soul could either penetrate Aquacity or leave it. Yves Soitch could breathe freely after that, convinced that

down there on the ocean-bed in the deep trench he was as safe as he would be in a sputnik.

Work in Aquacity went on round the clock. Moreover the very concepts of night and day were relative under several miles of water, in the realm of eternal darkness. The sequence of the hours was regulated by a special "time service". In the "morning" the outer panels of the dome-shaped dwellings were switched on via thousands of relays, projectors sent out blinding rays of light along the streets, that immediately attracted deep-water creatures long since accustomed to all this noise and movement under water: the dotted lights bordering the route to the drilling site were also picked out more brightly during the "daytime".

Precisely twelve hours later all lighting except that along the roads was switched off. The changing pattern of day and night made no difference at all to the rhythms of work, since this went on in three shifts round the clock regardless. Yves Soitch introduced this artificial succession of day and night so that people might go on living in their habitual time cycle and not lose their bearings in time.

There was a blazing glow at the bottom of the trench round the clock. From time to time a mushroom of orange light would appear above it and the layer of water around it would vibrate. Each nuclear blasting meant one step further into the depths of the Earth.

The people in Aquacity referred to Soitch as "Iron Yves". There was no end to the "headaches" he had to cope with. After the drills had got through the first few miles of the earth's

crust that had been quite thoroughly studied previously, they were up against strata full of unsolved riddles. The situation kept changing with kaleidoscopic speed, and the right method for dealing with each one had to be found: drilling speeds and techniques had to be amended, the direction or force of nuclear explosions had to be altered, or barriers to keep back raging lava had to be erected. Sometimes split-second decisions had to be taken.

Yves Soitch had to coordinate all the drilling work: he knew almost all the three thousand inhabitants of Aquacity by sight and by name. Paying no heed to the dangers involved, he often used to go to the well-head, and visit the most difficult sectors of the drilling operation. This fat figure, often short of breath and wiping the pouring sweat from his brow, could always be seen leaping out of his manipulator flexi-truck, checking that all installations were working properly, often taking the drilling superintendent's place at a control panel, to have a look for himself.

It was a mystery to the men of Aquacity when Yves Soitch ever slept for he could be found up and about at any hour of the day and night, and he never turned people away when they came to see him about any kind of problem, however small.

The laboratory was kept busy all the time as well, analysing soil samples that were being delivered in a constant flow from the borehole. Under the tremendous pressure even ordinary minerals, long since subjected to thorough analysis, acquired here new and unexpected

characteristics. Soon the temperature in the main well rose so high that even the heat-resistant suits of the drilling workers ceased to provide adequate protection. Yves Soitch then gave instructions for cryogenic installations to be assembled and made operational. The workers then acquired a powerful ally in the form of liquid, highly unstable helium, cooled almost to absolute zero. Circulating through the coil-piping that ran all down the walls of the well the helium kept out the heat rising up from the upturned bowels of the Earth. Mile after slow mile the Earth gave way to the human invaders, but not without many a growl and snarl.

* * *

In her capacity as chairman of the government commission investigating the circumstances of Hugo Lenz's death, Aurea Dervie was called upon to look through a good number of papers and other material connected in one way or another with the well-known physicist.

For the most part they were official documents, the doctor's correspondence with a dozen or so universities and major physics laboratories, copies of orders sent to various firms for instruments and equipment, replacement claims and much else besides. Lenz also used to correspond with many eminent physicists in other countries. From their letters Aurea Dervie could appreciate that Lenz had been viewed as a leading authority in his field.

How she used to torture herself with regrets

that she had not insisted that Hugo Lenz stay on for a rest-cure in St. Bartholomew's Clinic. He would have still been alive. She would have averted his death.

Now all that was left as a memento of Hugo Lenz was this thin sheath of letters, and the recording of his account of how the Swedish King had conferred the Nobel Prize on him.

He must have been a strange man, Hugo Lenz... Now as she went through the various papers Aurea Dervie became more and more convinced that the Hugo Lenz she had known and the one who came to life in the documents and his scientific correspondence were two entirely different people.

The letters addressed by Lenz to her personally, Aurea Dervie had not shown to anyone. Who should she read them to? Her friends? But how could a demi-robot have any? Hangers-on there were plenty, countless acquaintances, but no one to call a real friend...

Hugo had talked to her on several occasions about the police chief Arno Kamp, whom he had got to know better after receiving the unfortunate letter. "He's an intelligent man, worth talking to. Imagine, he even likes poetry!"

...After putting the half-faded violet into a glass of water, Aurea Dervie read again through the letter that she had received in the morning post. To judge by its style she thought it was no different from that sent to Hugo Lenz just over three months ago.

Hugo, thanks to his amazing memory, had several times quoted large sections of his letter to her, so that Aurea Dervie could remember

them as well. The anonymous writer had demanded from Aurea Dervie that she put her own field of public activity—medicine—in order. This meant that she was to use her authority to ban the transplanting of organs, which the indignant writer referred to as “monstrous, beneath human dignity and in the last instance unethical”. He went on to maintain that man was not a machine that could have its various parts replaced at will. The author grew more indignant still at the thought that in the St. Bartholomew’s Clinic experiments were being carried out to equip patients with electronically programmed organs. Aurea was accused of openly defying Nature instead of seeking to merge as one with it.

She spent some time going through the four typewritten pages and peering at the figure “1” inserted by hand. She had been allotted just a year to carry out the extensive programme outlined in the letter: to shut down all establishment engaged in organ transplants, to demolish factories producing surgical instruments for transplants, to close faculties of cybernetic medicine in medical schools, and finally to have burnt all literature on cybergisation.

Aurea Dervie closed her eyes for a moment. She was sitting on her own in an empty doctors’ office at the St. Bartholomew’s Clinic. She pondered as she rocked to and fro in her chair.

Whoever the author of the letter might be, he was incredibly naive. He wanted her, Aurea Dervie, of her own accord to do this, that and the other at the drop of a hat, as if it was in her power to shut down factories producing surgi-

cal equipment for instance. She would have been relieved of her post within twenty-four hours, if she had tried.

She would of course have been able to call a temporary ban on the production of certain kinds of surgical equipment, pronouncing them unsatisfactory. What would the factory-owners say though? At every step she would have met with fierce resistance from those who had a vested interest in the status quo.

As she went through Hugo Lenz's papers Aurea Dervie hoped that there were a few passages that could perhaps throw light on the circumstances of the incident that she was investigating.

It was a difficult and laborious task that lay ahead.

"...So I have three months left to live. A mere three. It's all ridiculous and so unexpected. Yesterday life seemed infinite.

"A healthy man does not think about death. He can plan his future, wonder what will be happening to him a year hence, three years or even twenty. A mathematician would say that twenty years for a man is tantamount to eternity. Naturally enough, if twenty-four hours means eternity to the short-lived moth. And what of a meson, whose lifespan is a mere millionth of a second?

"I am not a meson, nor a mere moth, but a human being. A human being condemned to death any time now. What difference does it make?—we've all got to die sometime. But no, why pretend. I'm young: 44 is no age. What have I accomplished in life? Honours? They

don't give me any illusions. It's just that I have learnt a little better than my colleagues to understand the structure of matter and is it just for this that the money and the comforts flow in?"

Aurea then picked up another page. "But what I managed to achieve in this life is only one part of the story. Now when I have to start summing up it is no less important to analyse the other side. What have I, Hugo Lenz, given mankind? I regret that it is not very much. After that ill-starred explosion I keep thinking about it...

"Mankind is carefree, like a child at play. Even when people are only a step away from disaster they still remain carefree like moths. Is it that they are carefree, or perhaps just plain ignorant?

"My experience is bitter. Has it been enough to warn other people? I must make sure that it is...

"Bark seems a reliable sort of chap, but his brains are somewhat dulled from police work. He could have made a physicist. But why, o why should anyone need physicists?!

"When Arno Kamp promised to catch the man who threatened me with death and render him harmless, for the first time in my life I regretted that the police weren't all powerful...

"More than anything else on earth I loved my work. That sweet shiver of anticipation from out of which, all of a sudden, after long days in the lab, there emerges the conviction that the truth is near at last, within your grasp.

"But now all these tiny glimpses of truth have merged together in the one Great Truth

and its light is more than I can bear. I am your soldier, shining Truth, and shall die as a soldier. And may help come from... Robin! ”

“Robin?” wondered Aurea Dervie: “Whom can Hugo Lenz have had in mind?”

She made a thorough check but among the acquaintances and colleagues of Doctor Lenz there was no one with that name. Perhaps Robin was a nick-name? But whose? As had become her habit in this work, Aurea Dervie discussed the matter with Arthur Bark, who knew the Nuclear Centre and its staff like the palm of his hand. But Bark was at a loss to answer this particular question as well. It might well have been some historical association that occurred to Hugo when he was scribbling away in his diary, Aurea Dervie decided. Perhaps it was a reference to Robin Hood, the legendary outlaw from mediaeval England?

Soon afterwards in the busy whirl of her work Aurea Dervie forgot about that name which had appeared briefly in the papers of the deceased doctor. Yet a short while afterwards Aurea came across another page among laboratory journals which was obviously the continuation of some earlier entry. “Goodbye to you too, Lucinda. I’ve grown fond of you and come to trust in you.” When she looked further back to the beginning of that entry it made Aurea’s heart miss a beat. “It’s only thanks to you , Lucinda, that I’ve been able to complete this last task which I’ve taken on of my own free will. And now it’s easier for me to depart from this life. Thank you, Lucinda.”

A hitherto unfamiliar and unpleasant feeling

came over Aurea. She called Bark over to see her. Arthur came round immediately: he knew that the chairman of the new commission was a woman far from soft by nature, indeed at times she could have outbursts every bit as violent as Arno Kamp's. It was quite clear that he was not going to have an easy time of it, just because he was now working with a robot, or demi-robot at least: there was no peace for the wicked!

"What's the atmosphere like at the Nuclear Centre?" asked Aurea Dervie.

"Everyone's still feeling very bewildered," replied Bark.

"Are they discussing Dr. Lenz's death?"

"Only reluctantly."

"Try to listen to conversations that veer round to that subject," advised Aurea Dervie.

"You might glean some kind of clue from them."

"Should I report to you or to Arno Kamp?"

"It doesn't matter. Our efforts are coordinated."

"Nothing seems to be going right with the work at the Nuclear Centre nowadays," Arthur Bark told her. "Experiments keep going wrong. Doctor Lenz left things in a real muddle for those that came after him. It looked as if the old fellow liked taking too much on himself."

At the phrase, "old fellow" Aurea frowned: she hated all signs of familiarity.

"The Nuclear Centre's like a child without a father, as one of the staff said," Bark went on, sitting slumped in his chair. "I can't believe Doctor Lenz really took fright after all and decided to 'throw out the keys'? If he did though, then why should Doctor Lenz have..."

“Tell me, Bark,” interrupted Aurea Dervie, “do you know all the staff at the Nuclear Centre?”

“Of course that was one of the tasks set me by Kamp,” answered Bark.

“Then tell me please, who is Lucinda?” Aurea went on quickly.

“Lucinda?” echoed Bark in amazement, noticing with relish that Aurea Dervie seemed a little uncertain of herself. So, even robots could lose their cool!

“I have come across the name Lucinda in Doctor Lenz’s papers,” explained Aurea Dervie in a matter-of-fact tone.

“Lucinda—is a machine,” Bark said.

“A machine?”

“An ordinary computer, as the programmers say,” added Bark with a smile. During the time he had spent at the Nuclear Centre he had managed to pick up the odd scrap of know-how.

“A machine? That’s strange... Lenz addresses her, as if he was talking to a woman,” commented Aurea Dervie.

“Funny,” agreed Bark.

“All we can do now is to guess at Doctor Lenz’s state of mind at that time,” Aurea observed.

Bark said nothing, limiting his response to a compliant nod.

* * *

Imant Ardonis had a soft spot for geology. He enjoyed all sciences concerned with the Earth.

He used to like reading through thick folios of reports from geological or archaeological congresses and found them as exciting as a good novel. Novels on the other hand Ardonis never read. The study of geological reports was a form of relaxation for a mind worn out with endless formulae.

While physics was his all consuming passion it could be said that Earth sciences were his hobby. When it came to geology in particular Imant, thanks to his regular reading of literature on the subject, had acquired no small fund of knowledge.

He was interested now in the Aquacity project. It was the audacity of the scheme and the imaginative approach behind its execution that had attracted his attention. That was really something—to break through the planet's hard crust and then force hundreds of miles further down still to penetrate the stratum of seething lava.

In space man had felt at home long since, while the deep heart of man's own planet was still out of reach.

Ardonis knew that the exploitation of a deep trench as a starting point for deep drilling was no new idea. But no one had succeeded in carrying out such schemes before because available technology had not been sufficiently advanced. Ardonis was always thorough in pursuing his interests: he filed away all the material he could find on Aquacity, which admittedly was not very much. On reading one particular article Ardonis was deeply impressed by the speed at which the drilling work was progressing. It definitely looked as if Yves Soitch knew his job.

When they had drilled down through the hard crust of the Earth and reached the molten magma, Imant Ardonis began to study again various works on deep strata of the Earth's bed-rock and the structure of the sea-bed in the vicinity of the Atlantic coast. It was then that the first seeds of doubt were planted in his mind.

The temperature and pressure of the lava at that deep level revealed a great deal to him with his physicist's training. In his experiments for splitting quarks Ardonis had investigated star temperatures and colossal pressure levels and he had a good idea of the risks to which the research might be exposed at such depths. When under great pressure liquid can turn to stone and steel start flowing like water.

What was Yves Soitch relying on? How was he planning to rein in the fiery elements in the bowels of the Earth? It must be assumed, he thought, that Soitch had made the necessary calculations. They would have to be absolutely accurate. Otherwise ... the very thought made Ardonis gasp for breath, when he started imagining what might happen if the magma were to burst into the main well at some great depth. Aquacity would be flooded not just with water but with fire as well, and there were three thousand people there too. Not to mention the fishing village on the nearby shore.

Lucinda was a useful machine, although she had her little ways like any woman. No special proof was required to show this. Hugo Lenz and other researchers at the Nuclear Centre had carried out intricate calculations with its help, calculations that had thwarted other computers.

At the dawn of the computer revolution people had believed that all computers of one particular class would be identical. But that idea had somewhat later been quietly dropped. Computers gradually became more complex and acquired more advanced "memories" and "data banks" and they started to assume what in the case of living creatures we refer to as individual characteristics. One machine turned out to have a penchant for differential equations, another proved particularly suitable for work in celestial mechanics and a third for integrals. The "likes and dislikes" of a particular machine could find expression in the ease and dexterity with which it solved its "favourite" type of task, and on the other hand in the lengthy and unnecessarily complex way in which it tackled an "unpopular" one: enough to make the mathematician who had formulated it clutch at his head in despair.

Ardonis had cause to remember that Lucinda was not only a quality computer but also one with a mind of its own when he decided to calculate the durability threshold of the well that was being sunk from the underwater base at Aquacity into the heart of the Earth.

Having fed instructions into the computer Ardonis leant up against the table. That unpleasant young man Arthur Bark with the rather glazed eyes walked up and down outside the computer lab as Ardonis waited. Imant had little time for the new member of staff. He had taken a dislike to him the very first day when Doctor Lenz had brought the dark-haired tough into his office and introduced him as a specialist

in neutrino pencil beams. That had been soon after the explosion in the laboratory that had occurred at night, when the installations had been under automated control.

More than three months had passed since Arthur Bark had first appeared at the Nuclear Centre and Ardonis had had several opportunities to observe that Bark always resorted to pregnant silences when complex matters concerning the focussing of neutrino pencil beams came under discussion. Ardonis had never interfered: any recommendation from Hugo Lenz was good enough for him.

There had been one occasion though when a really blatant example of Bark's gross ignorance had almost led Imant to open Doctor Lenz's eyes to the limitations of his new member of staff, but then that ridiculous incident with the purse had resulted in his arrest and for a time knocked him completely off course. Then Lenz had died and Ardonis had decided just to ignore Bark. After all how many other mediocrities like him were occupying posts for which they were not qualified.

He, Imant Ardonis, was not planning to change the world. It had looked as if Doctor Lenz had been aspiring in that direction, as he had made out in a somewhat vague, inconsistent fashion during the last months of his life.

Ardonis' objective was far more modest: it was to split quarks, and break down the last refuge of Creation's secrets, to grasp matter in the iron embrace of the equations which made up the unified field theory. Let other people worry their heads about reshaping society. He

was not even sure whether such a task could ever be solved.

At that moment Arthur Bark walked past again casting a suspicious look in Ardonis' direction. Imant in his turn looked at his watch, for it was high time that Lucinda should be coming up with an answer to the task set her. Yet she was still maintaining a stony silence.

"Where's the answer?" asked Ardonis bending down low over the microphone membrane. At that moment a print-out emerged.

"Lucinda not ready to solve one problem twice," Ardonis read.

"There's been some mistake." Ardonis tried to explain. "No one here could have tried to solve this problem concerned with the deep-level drilling except me."

"Lucinda never makes a mistake," came the laconic statement from the computer.

"Who then could have worked on the problem before me?" asked Ardonis, beginning to lose his patience.

Lucinda did not respond: the question had been of the kind she was in no way obliged to answer and she defended her rights.

During the day Imant Ardonis tried to find out which other members of staff had been investigating the problem before him, but some of them had never even heard of Aquacity and the others were completely indifferent to deep-level drilling. It was after that that Ardonis almost had to grovel on his knees to persuade Lucinda to give him a second assessment of the situation. He was taken aback by Lucinda's answer: the whole giant under-water installation was hanging

by a thread. Despite her “temperamental” nature Lucinda could not lie in her calculations or give incorrect figures.

Snatching up the print-out Ardonis decided to make straight for the editorial office of the largest newspaper in town. The whole world needed to know of the dangers threatening Aquacity. The men working under water had to make drastic steps to save the situation. Either the safety margin had to be made far greater or the work would have to be called off at once. The first solution would of course cost a pretty penny, but this was surely not the time to assess costs when the lives of thousands of people were at stake?

On his way out of the laboratory Imant Ardonis bumped into Don Basilio. Since Hugo Lenz’s death the cat had been pining. He used now to wander from room to room looking for his master, and giving all other staff a wide berth. His saucer of milk remained untouched. No one knew what the cat ate. Arthur Bark was convinced that Don Basilio was keeping himself going on quarks.

* * *

The last person who had seen Lenz before his death was his wife. Arno Kamp had questioned Rina on many occasions about that night, but what she had to tell shed no light on the demise of the country’s leading physicist. Rina’s replies were compared with the data compiled by the forensic experts, but there were no grounds

for the police chief to accuse her of lying.

Today she was to report to his office at eleven o'clock. She arrived a little ahead of time, and Jules let Kamp know at once that she was there.

"Let her come in," said Kamp.

She sat down on the very edge of the arm-chair, the very same one in which her husband had been sitting not so long ago, when he had brought the police the letter predicting his death.

"When Doctor Lenz flew home in the evening, did you notice anything strange about his behaviour?"

"No, he was in a cheerful mood as always," replied Rina with a sigh. "He joked that we were like flies under a glass dome: each of our movements was observed by the security police, and at the same time it was impossible to fly away from out the dome. He repeated several times that he had completed his life's work and could now die peacefully... In general he was in a mood for jokes that evening. I told you that before."

"We have been making inquiries. Doctor Lenz's work at the Nuclear Centre had not been going well of late, his experiments for splitting quarks had been getting nowhere, and then there had been the explosion of April 2nd... How could he have stated that his life's work was complete?"

Rina shrugged her shoulders, and said: "I told you before that in those last days Hugo had not been initiating me into his work secrets."

"Tell me again please, when and how you discovered that your husband was dead?"

Dispassionately, as if she was reciting a well-

rehearsed part Rina described the scene: "I had woken soon after midnight. I don't know why. I felt uneasy. Hugo as always was sitting at his desk, to which he had gone with the perennial phrase: 'I've just got one little problem to sort out.' I don't know how, but then I dozed off again—I had been worn out those last few days... When I came to Hugo was still sitting at his desk, but he had fallen asleep and his head was flopped down on a half-filled page of writing. I called to him but he didn't respond. And Hugo was a light sleeper, what's more. I jumped up and went over to him..." Rina stopped to take a breath. It was only the convulsive movement of her fingers that revealed the emotional strain she was under as she told this story. "Hugo's lips were frozen in a grin. He was dead."

"What make you think so?"

"His eyes... Hugo's eyes were wide open. His right hand was lying on the calculator. There is no need for any more now, is there?" inquired Rina, cutting herself short. "When I shouted out, the security men came rushing in at the door and you have detailed reports and photographs of what followed..."

"There are reports and photographs," agreed Kamp, "but you're not answering my question. I am interested, let me say it again, in what did not get into these reports."

Rina shrugged her shoulders almost imperceptibly, and said: "But I have nothing to add."

Rina came home feeling completely drained. A grey device had been following her ornithopter, but she scarcely paid any attention to it. She knew that at home and all about her there

were no end of electronic and other “eavesdroppers” nowadays. What was the point of it all? Nothing could bring Hugo back...

The rooms were caverns of loneliness. Robin had vanished somewhere leaving the television switched on. Rina sat down at the writing desk which had been left open since that fateful day. Nothing was left here after the police’s swoop—just a few scattered books that had been carefully leafed through by the detectives’ well-trained fingers.

She had heard that hundreds of people had already been summoned to give evidence to the committee of inquiry headed by that hateful Aurea Dervie. Let her get on with it! She would not dream of going there, unless literally dragged.

Rina sat there for a long time. A relentless tune filled her ears and some singer, rather like Aurea Dervie, writhed around on the screen. Then came a series of commercials, which Rina only looked at out of the corner of her eye. She had even forgotten to reprimand Robin for switching on the television without permission.

There was a knock at the door out of the blue, and she discovered Imant Ardonis on the doorstep,

“Haven’t you been detained?” asked Rina.

“I’m not a criminal,” replied Imant with a shrug.

Neither of them said anything after that, feeling rather awkward.

“Rina, I want to invite you to the theatre,” said Imant, twirling his hat in his hands.

"No, Imant," said Rina with a shake of her head.

" 'Othello'?"

"No."

"In the old days you didn't refuse me your company."

"In the old days maybe, but not now. Not even the slightest shadow of scandal must ever fall on Hugo's name."

"You're probably right. So be it then, goodbye," said Ardonis and then he walked back to the door with heavy footsteps.

"Wait a moment though, let's have some tea. Robin!" called Rina in a loud voice.

"No, thank you. I'll be on my way."

"Robin's been getting quite insufferable lately," lamented Rina.

"Recently I've stopped trusting these automatic devices," commented Imant. "Lucinda seems to have got quite beside herself. No one seems able to adjust her properly. What's more her typing mechanism has disappeared somewhere."

When she was on her own again Rina looked into all possible nooks and crannies and even glanced into the bath but Robin was nowhere in the house.

...He eventually turned up on the doorstep, a squat figure complete with a square registration disc on his chest.

"Where have you been?" asked Rina in a forbidding tone.

Robin was at a loss for something to say. He clearly was most anxious to lie, but deception was at yet outside his range of skills.

Without anyone noticing, the term “violet victim” took root in local journalese, and the list of them grew. Soon over a hundred people had received a message complete with the flower. What is more, they were prominent people: high-ranking officers, financiers, men of letters, scientists... The latter made up the largest group of all.

The receipt of a violet became something in the way of an inverted status symbol, a sign of recognition from the state’s unknown enemy.

The idea was even put forward that a club be set up for the “violet victims”, but the President vetoed that plan. After the veto had been announced, gossips started linking that development with the fact that the President himself had not yet received a violet!

When the common features of the letters were singled out, an interesting picture emerged: the author’s demands, reinforced by an unequivocal threat, could be summed up in the motto expressed in the first letter received by Hugo Lenz: “Back to Nature!” “The advance of scientific research will bring mankind to its doom!” and “The keys to Nature’s secrets must be thrown out beyond man’s reach” were the constant refrain.

At one of the first “violet” conferences one of the police officers, John Barbarian, put forward the idea that not one author, but a whole group of skilfully organised scoundrels and blackmailers was typing and sending out the letters. Their aim he saw as the sowing of unrest, since

“fish are always easier to catch in cloudy water”. The typewriter used for the letters had not been tracked down and this fact John Barbarian saw as confirmation of his hypothesis: he was convinced that the typewriter was being stored in some well-concealed cellar beyond the reach of the police force’s tentacles.

On Kamp’s instructions the letters were subjected to textual analysis. For this analysis an old computer programme was used that had in the past served to establish that the author of *King Lear*, *Othello*, *Hamlet* and a number of other works of genius were not the fruit of joint efforts on the part of a group of writers, as certain critics and literary historians had maintained, but the not unknown figure of William Shakespeare... On this occasion the group theory was again exposed as groundless. The computer used now investigated the tiniest nuances of style in the letters, also the average length of words used and eventually ascertained that the “violet letters” had all been written by one and the same person.

The respite granted the recipients of the letters varied widely: some were granted a month, others a year, but most of the selected candidates, and Arno Kamp included, were not given any definite time-limit.

In order to establish how “serious” the author’s intentions were, a survey had to be conducted to plot the accuracy with which the various threats were put into effect. Arno Kamp understood, however, perhaps better than anyone, that it was very difficult, and at times even impossible to distinguish between accidents and

assassinations. If a large group of people were to be investigated then the law of large numbers asserts itself. The head of the police force knew that statistics had to be taken with a piece of salt. From the statistical point of view accidents appeared as inevitable as say marriages.

It was buried in sombre thoughts of this kind that Aurea found Arno Kamp when she paid him her next visit.

"Well, what good news do you bring?" asked Kamp, on his way out to meet Aurea.

"The investigation is complete."

"So you mean, it was murder?"

Aurea shook her head, and then after a moment's silence she said: "I saw him just before the end."

"So, he came to see you after receiving the letter?"

"Yes."

"Forgive me, I beg you, for all these questions," apologized Kamp with a smile. "This of course is no interrogation, merely a private discussion."

"I understand."

"Lenz spoke to you then about the anonymous letter he'd received?"

"Yes, he talked to me about it, and at length."

"How did he take the threat to his life?"

"He considered that he was doomed, and that he had precisely as long to live as predicted in the letter. That was why he refused to spend any time at the clinic: there wasn't much time left for him to tie up all the loose ends."

Kamp chewed at his lip and asked all of a sudden: "And you rule out any idea of suicide?"

"I had thought about it," replied Aurea

without a moment's hesitation. "Yet there's precious little to choose between suicide and murder really. There would have been clues left behind. You know that, better than I do. Yet the experts didn't find any such evidence."

"I know the results of their investigations. But apart from scientific fact, intuition always had a part to play. Listen a moment, Aurea. What do you think about the whole business?"

Aurea thought for a while and took out a cigarette. Kamp obligingly lit it for her.

"It's clear for anyone to see," she began, "that the author of these letters is anxious to change society. There is nothing ambiguous about his demands. John Wilnerton was about to start producing the 'ultimate weapon', and was ordered to stop, Lenz was ordered to put a stop to his research on quarks and throw out his 'keys' to the secrets of Nature. Yves Soitch was called upon to put his drilling project in Aquacity into cold storage, and so on, in the same vein. I don't know many of the letters but the rest are probably all much the same."

"More or less."

"In any case, it all looks tremendously naive, like some kind of children's game."

"A children's game!" exploded Arno Kamp. "You don't mean to tell me Hugo Lenz was just killed for fun?"

"It has not been proved that he was killed," objected Aurea Dervie. "On the contrary I, as a doctor, am convinced that he died a natural death."

"On the appointed day and all! You're talking in fairy-tales now."

"I don't think so."

"Your death has also been predicted. Doesn't that worry you?"

"I'm a fatalist. What's more, I have faith in your officers," replied Aurea with a smile.

"I'll see you again tomorrow, with the other members of the commission. We must work out a common approach," said Arno Kamp as a parting shot.

After Aurea Dervie had left he spent a long time pacing up and down his study, trying to calm down. His worries were interrupted by the appearance of John Barbarian, who was now in charge of the surveillance at the deceased doctor's house.

"Is there anything to report?" asked Kamp.

"Here's a piece of tape, Sir."

"A whole reel?" remarked Kamp in surprise.

"What's Rina Lenz been up to talking to herself?"

He played it back and after an initial buzz voices could be made out: they were Rina's voice and that of an unknown man.

"Where have you been?" asked Rina in stern tones.

"In town," roared back the man's voice.

"Why?"

"That's a secret."

"What kind of idiot is that?" asked Kamp hastily.

"Robin, a robot," explained Barbarian.

On hearing that Robin's secret belonged to none other than Doctor Lenz, Kamp's eyes almost popped out of his head. Barbarian stood there thunderstruck.

"How long did it take you to fly here?"

asked Kamp, when he had listened to Robin's last remark to Rina: "In the name of Doctor Lenz—don't! " after which the tape switched off automatically.

"Ten minutes."

"Take the flying squad and make straight for Lenz's house. Bring the robot here. Look sharp about it! But don't damage Robin! " Kamp shouted after him.

Finding himself alone in his office once more, the chief of police looked down at his watch. Precisely at midday it was time for his five minutes' relaxation according to the canons of the oriental sages, but today he was not going to find any time for yoga exercises.

There was a buzz from the radio-telephone on his desk.

"J ... J ... J ... John Barbarian here," he heard over the radio through interference. Kamp knew quite well that Barbarian had never stuttered before. What was up?

"M ... m ... m ... mission failed. Robin's disappeared," reported John Barbarian.

"Search the place from top to bottom! "

"We've done that, Sir."

"Give Rina Lenz a real grilling."

"We have. She doesn't know anything. She says that Robin stopped obeying her. He's not functioning properly and so by law she's not responsible for him any more."

"Close off all the streets. Cordon off that district! " shouted Arno Kamp beside himself by now, realizing that all such steps would have little hope of achieving the desired end. A robot out of control was a genuine disaster and catching

one was more or less impossible. All one of the mechanical men had to do was tear off its registration disc and then it could go under in the city of several million, lost like a drop in the ocean. If the shining number on its chest was missing, anyone was hard put to it to distinguish a robot from a human being!

* * *

As they drilled down deeper into the Earth's crust the pressure and the temperature mounted and it grew more and more difficult to hold back the menacing thrust of the molten magma lapping round the bottom of the well. The deeper they drilled the larger grew the distance over which communication had to be maintained and this also gave rise to additional problems.

Soitch had put a stop to all contacts with the shore and the men of Aquacity were getting restless; they had grown used to fresh fish that they had been able to buy from the fishermen in the coastal village. Now they had to make do with food delivered to Aquacity in special containers brought out to sea.

The three thousand people in Aquacity were working round the clock, galvanised by "Iron Yves" 's sheer will-power. Radio contact through their watery roof with the outside world was out of the question. Letters were taken to and from in special containers like the food.

As before, large numbers of volunteers placed themselves at Soitch's disposal, attracted by the adventure of deep-level drilling and also by the

payment system that provided for bonuses at each new stage of the drilling project.

In the last mail Yves Soitch had received, as usual, a few dozen letters. Pushing them over casually to one side of his desk he opened a packet from Arno Kamp. The police chief was insisting that Soitch leave Aquacity and return to dry land.

"A critical time is approaching," wrote Arno Kamp. "In case you have forgotten, it will soon be eighteen months since you received your letter."

"Forgotten! .. He must be joking," muttered Soitch with a wry shake of his head.

"You must spend the critical days with a reliable body guard," the letter went on. "We are going to put you in an ivory tower, or to be more precise a bullet-proof steel tower. I know how dedicated you are to your work and how difficult it will be for you to leave Aquacity at this stage. However the drilling project is scheduled to take two years, so even after spending two weeks up here, you'll still be able to go back down again and see the work through."

Looking up from the letter, Yves Soitch could imagine perfectly clearly how at that point Arno Kamp would have stroked the bronze statue on his desk and said something like: "The most important thing is that you should survive the vital period, indicated in the letter. Once that's behind you I won't be making any more demands, my dear chap! "

"The main thing is to survive the period specified in the letter," read Yves Soitch out loud. "It's vital that the threat should not be carried

out as a result of our or your carelessness. Imagine how that would make people panic.”

Soitch put down the letter on the control panel and wondered what to do. Kamp's orders looked reasonable, but he could not comply with them all the same. Kamp did not realize—for Soitch had been keeping it a secret this far—that the time-schedule for the drilling project had been compressed. They would be getting down to the required depth not two years from the starting date but a whole six months earlier, namely any day now. How could he, the director of the Geological Centre and the organiser and driving force behind the Aquacity project, desert it at such a crucial time? Another few hundred metres and then all the men from Aquacity would be coming up to the surface—triumphant tamers of the subterranean elements. Those who had gone down underwater as relatively poor citizens would surface at the end rich enough to fill with envy those whom the meticulous selection committee had dropped for one reason or another when recruiting the Aquacity work force. Then Yves Soitch, together with all the rest, would come up to enjoy the sun and the fresh air. It was not long to wait now.

The control panel that Soitch was leaning on continued to live its routine flickering life, attracting the attention of those manning it every single minute.

It now reported: “The temperature at the bottom of the well is rising steadily and shows no sign of stopping.” Soitch gave instructions for an increased supply of liquid helium, but the well continued to get hotter.

"It's unbearable! " came a hoarse bark from down below. Soitch recognised the voice of his senior drilling superintendent.

"Switch on the ventilators."

"They're blowing in hot air. We're stopping the drilling."

"Don't you dare. There's only one blasting to go, just one more."

"You're going to kill the lot of us."

"Your shift will lose its bonus," threatened Soitch.

"You can keep your bonus," came back the reply. "We're coming up."

"Cowards! I'm coming down to you," shouted Yves Soitch and rushed over to the flexi-truck to go off to the men. But before doing so he took the precaution of slamming down the green button in the middle of the control panel so as to jam the lift cage to prevent anyone from leaving the access-shaft. The flexi-truck hurtled him down one of Aquacity's streets that were now deserted, for those whose shift was over were catching up on their sleep after another stint in the hellish working conditions underground.

He briefly caught sight of a cemetery of sharks' teeth, a cone-shaped mound of concretions, a block of iron-manganese ore; then he floated past a hill whose summit had come adrift—an underwater volcano that had burnt itself out millions of years ago.

In the distance there now appeared constructions which were lit up from beneath. Without reducing speed Soitch drove straight into the lock chamber. As the lift cage moved down the temperature in the well rose, his eyes were soon

blurred with sticky sweat.

The men were waiting for Soitch. The access-shaft was full of people and there was an agitated buzz of talk reminiscent of an angry beehive. At the edge of the platform the poor light hardly made any difference to the visibility. As he jumped out of the lift cage Soitch remembered pictures he had seen of Dante's inferno. When Soitch came into view the drilling teams stopped their talk and waited tensely. The physicists, geologists, electronic and thermonuclear experts all stood listening for what "Iron Yves" would come out with.

Soitch walked out onto the middle of the access-shaft and went up to the apparatus whose drilling rods stretched far down below, beneath the thick metal decking at this level. It was from this platform that the blasting charges were set off, after which automatic excavators prepared the next part of the well.

"Why isn't the lift to the top working?" shouted a voice from the crowd.

"I switched it off," answered Soitch in a calm voice. The hot air seemed to scorch the lungs: it was so thick he felt he could almost take hold of it. Soitch raised his hand and the talking stopped. In the quiet that followed all that could be heard was the bubbling in the pipes that brought liquid helium through into the walls of the well.

"In three days, or four at the most, we shall reach the scheduled depth," announced Yves Soitch, "and then your mission will be complete. You will go up to the surface rich men..."

"Switch the lift back on!" came a shout, cutting Soitch off in midstream.

"I'll double your bonus," shouted Soitch. His voice reverberated in the steamy air which amplified any noise.

"That's not worth risking your neck for!" retorted the drilling superintendent.

"Back to work!" shouted Soitch. "Prepare for the next blasting."

He walked over to the central drilling installation, but the drilling superintendent stepped forward and blocked his path. Now that there was only a tiny step between him and his goal, when only one, one last blasting was required ... surely his life-work was not going to be ruined?

No longer in proper control of his actions Soitch tried to push the man to one side, but his arm was seized and given a sharp wrench. Soitch brought his ray-gun out of his pocket and aimed at the pale face before him, as the superintendent staggered backwards. Then he stepped over his body and walked up to the central drilling installation that gleamed with the oil and grease on its surface.

The work force dispersed this time without a murmur. After a few competent commands from Soitch the machinery came to life. Down beneath the thick decking plates, the by-now familiar preparations for the last of the atomic explosions were being carried out.

The walls of the drilling-hole shook slightly, as if they too were sensitive to the tremendous pressure to which the caissons were subjected.

Unexpectedly the floor at the bottom of the drilling-hole began to shake and shudder. It was too early, as the blasting was not scheduled to

start for a good ten minutes. The well was filled with a flash of light.

A wave of intolerable heat hit the faces of the waiting men. It was all of a sudden as bright as daylight and people started to yell out in fright.

"Here comes your violet!" screamed someone in the confusion and those were the last words grasped by Yves Soitch's conscious mind.

* * *

The disaster that struck Aquacity and the village on the nearby coast had the whole county up in arms. The vigilant opposition unearthed the fact that long before the tragic events, a letter had been sent to the editorial office of the most influential paper, albeit without a signature, in which were formulated well-founded arguments against deep-level drilling in Aquacity at the bottom of a syncline.

What was it that had made the editor hide the letter under the carpet? Why had the letter not been made public? Why had not the work in Aquacity been shelved, but on the contrary speeded up? The opposition insisted on an investigation, the results of which were not, however, published and this, in turn, gave rise to a large number of rumours and stories.

"Have you heard of the letter in which the collapse of Aquacity was predicted a year before they all perished?" Rina asked Imant Ardonis on one occasion. "Or was that letter a mere invention?"

"There was a letter to that effect."

"Are you sure?"

"Quite sure."

"Why was it ignored?" inquired Rina indignantly.

Imant shrugged his shoulders. "It's time you were used to things like that," he said.

"What kind of things? A catastrophe killing a thousand people, that no one tried to avert?"

"You're wrong there. I'm sure that all possible steps were taken. The bore-hole for the drilling work was specially reinforced, as much as possible. But any new departure involves risk."

"But why do risks have to be taken?"

"Nothing venture, nothing gain."

"Perhaps you're right, Imant," admitted Rina. "Yet there's something I don't understand, something very important."

"There was a time when I used to think along the same lines as you," explained Ardoins. "For a time I too suffered from faith in universal justice, but I got over it, just like the measles."

"You know what the most awful thing of all is?"

"What?"

"That Yves Soitch and the others from Aquacity died at the very time specified in the letter."

Hugo Lenz's widow had long since given up the house, it had turned out to be more than she could afford. She had taken a tiny room in a second-rate hotel. She was thinking about ways of taking up her previous profession again, but it was not easy to find a job as a doctor. She could have turned to Aurea Dervie; Rina was quite sure that Aurea would help her out. However she

would only ever visit the St. Bartholomew's Clinic as a last resort.

The only newspaper she used to read nowadays was *Chess News*. The only person from her old circle of friends she used to see was Imant Ardonis and that was only on rare occasions, now that she had made it quite clear she did not want the relationship to be any closer than it had been in the old days. The only shared interest they seemed to have nowadays was their memories of Hugo. They spoke about Lenz as if he was still alive, recalling his habits, favourite little phrases and jokes. Ardonis used to keep Rina informed as to how the work on splitting quarks was progressing.

One evening just after Imant had left, there was a cautious scratch at Rina's door. Rina thought at first it must be a cat and she pushed the door open a fraction. Before her on the door step stood a familiar squat figure. "Robin!" gasped Rina.

Yes, it was Robin, all right, but without his registration number on his chest, a crumpled, wilted version of his former self.

"In you come," said Rina and locked the door. Her heart started to beat faster.

Robin's movements as he advanced through the room were hardly perceptible as in a slow-motion picture. Rina caught on at once to the fact that his power supply was running out.

"I've got thirty minutes left to act," announced Robin, as if in answer to her wonderings. Rina knew that nothing could be done about it.

Certain ball-point pens people just throw out when the ink runs dry, indeed they are specially designed so that they cannot take refills. Robin and his kind were produced on the same principle. It was to ensure that robots did not go beyond a certain level in their development. A robot could of course use its power supply in a variety of ways. On average the power supply was supposed to last for seventy years.

As he stood there before her, Robin seemed to have turned to stone. There was something about him that reminded Rina of Buddha, whose statue she had seen once in a museum she had visited with Hugo.

“Robin, who killed Doctor Lenz?” asked Rina in a low voice.

“I knew you’d ask that. That’s why I’m here, although it was hard for me to get here,” said Robin. Reeling a little as he spoke he went on: “No one killed Doctor Lenz.”

“No one?” asked Rina again.

“No one. He killed himself.”

“I don’t understand.”

“Here you are,” said Robin handing Rina a rather shabby notebook. “This belonged to Doctor Lenz. Have a look. Then I’ll answer your questions. Only hurry—I’ve only got another twenty minutes to run.”

Rina started feverishly to leaf through the pages, filled with Hugo’s familiar writing. Formulae ... plans for experiments ... half sentences...

“...A remarkable method for harnessing quarks. I’ll test it out today as ever is. If my

conjecture is correct, then ten times less energy will be needed for splitting quarks than people had thought to date, including my dear friend Imant. I'll try tonight. I don't want to put it off. It's worth going without a night's sleep just to look at Ardonis' face when he hears my findings."

This was followed by a few lines of formulae.

"The experiment is extremely simple. I don't want to let anyone in on it for the time being. Especially seeing the present apparatus is all that's needed. Rina's asleep... It's decided, I'm off to the institute..."

Rina remembered that, now so distant, April night when she had woken up to discover Hugo was missing and then had lain awake worried until dawn, disturbed by all manner of fears. Later when she had heard his ornithopter approaching the house she had gone back into the bedroom, lain down and pretended to be asleep...

So that was where he had been flying to! The same old incorrigible ambition, her own impatient, impulsive Hugo. It was so like him: experiments, and scientific truth had always come before all else. These jottings were at variance with what Imant had been telling her about his collaboration with Lenz at work during the last few months! Imant had been rather reluctant to go into details on the subject but during his last visit he had let fall the remark: "Before he left us Hugo had managed to achieve a good deal."

"Yes, he had been working all out the last

few days," confirmed Rina.

"I don't mean that," Imant muttered. He had paused for a moment and then added: "I don't know what Lenz did to anger the letter-writer who threatened his death if Hugo did not comply with his demands."

"D'you mean that Hugo carried out those demands?" Rina had asked.

"I'd say he even went too far in that direction," sighed Imant. "He mixed up so many things in his last experiments, or to use the letter's words, threw out the 'keys to Nature's secrets' so skilfully that to this day we can't find the slightest trace of them."

Rina slowly put down the notebook. Robin did not stir.

"Have you sent out all the letters?" Rina asked next.

"No."

"Why?"

"The power's running out."

"Where are the rest of the letters?"

In lieu of an answer Robin opened the panel in his chest and a thick packet of letters fell out onto the floor. Rina picked up one at random. She repeated the address in tones of awe for it was addressed to herself and her address was clearly typed on the envelope.

She had not had time to finish reading the letter to her from Hugo when Robin fell to the floor with a clatter. It was the end.

Rina sat down on a chair and shut her eyes. What would Hugo be writing to her? What would he demand of her? Would he threaten her with an untimely death as he had all

the other "violet victims"? Surely he would not think her ready to change this sorry world?

At last Rina mustered up the courage to open the letter. There seemed to be something missing from the letter. There was no violet in the envelope. She automatically shook the packet but nothing fell out. The letter was a thick one. Rina spent a long time reading it, and still longer re-reading it. Everything which she had managed to get used to was thrown to the winds now. It was difficult to take it in, but now she had to act, ACT! The letter addressed to her, Rina, was not supposed to have been delivered for some time: it was a miracle that Robin's power supply had run out and that he had returned to her before his final collapse. After putting the letter away into her bag Rina rose in a resolute mood and stepped over the outstretched robot. Now she knew what she had to do. First of all she had to find Imant Ardonis as quickly as possible. How long ago was it that they had met? Yes, three days ago... Imant had not yet ... not yet...

These last thoughts came to Rina as she hurried on her way. From the moment she had decided to act, time had seemed compressed and all too scarce. She felt that the escalator was hardly even crawling, and that the passengers were moving like sleepy flies, while the carriage of the underground train seemed glued to the platform, hardly able to pull away again... Finally the train gave a shudder, swayed and began to gather speed. Signal lamps streamed out behind them at the windows, as they sped by--but

soon they too merged together in continuous lines of light.

Rina suddenly felt someone was looking at her intently. She turned her head slowly and saw a young man sitting right next to the exit door. Catching her stare, he hurriedly buried himself in his newspaper. Yes, it was he who had jumped onto the fastest part of the moving pavement going past the hotel, where Rina was staying. It was he who while deliberately turning his face away, had hurried after her when Rina had elbowed her way into the carriage of the underground train. It was some young stalwart from Arno Kamp's outfit. To hell with them all—with the young tough and the whole department. What difference did they all make now?

The train swung gently round the corners in the track. Rina leant back in her seat and shut her eyes. She could have a little doze, just for fifteen minutes. What hope was there of dropping off now though? Sentences from Hugo's last letter kept spinning round in her mind. She also needed to think out what she was going to say to Imant.

After leaving the Nuclear Centre, Imant Ardonis had never dreamt he would find Rina waiting for him. Yes, it was her... Imant quickly stepped out of the stream of Centre employees and walked over to the hoardings that Rina was perusing as she waited.

"Hallo, Imant," said Rina and she took him by the arm. The young man holding the rolled-up newspaper moved off slowly after them.

“For heaven’s sake think of something to shake off that character,” whispered Rina drawing closer to Imant. “At least for a few minutes.”

“Which character?”

“But don’t turn round at once. He’s following us, that’s him with the newspaper.”

Chattering about mere trivialities they walked into the nearby park and set off in the direction of the fair-ground. There was a queue at the Big Wheel. Children were pushing and shouting to each other in their excitement. An elderly ticket seller—the only living being in the whole of that realm of technological entertainment—let them pass through to get into a vacant two-seater booth.

It was only when she had strapped herself into the cabin that Rina really appreciated Imant’s idea: at least now they could talk in peace. The man with the newspaper was left at the bottom, still keeping his eyes glued to the pair.

Their car floated upwards, and rollicking music poured forth from the loudspeakers. Rina looked down. Their tail was obviously wondering what he should do next. Having done so, he then sat down on the nearest bench and unfolded his newspaper. After all it was not as if he was failing to carry out his instructions: he had been asked not to let his eyes off Lenz’s widow and this he was doing quite conscientiously. As for the fact that she had decided to flirt a little with the handsome kill-joy, Lenz’s former second-in-command ... well probably any woman would have done the same.

They were fairly high up by the time the young man with the newspaper decided to go into a near-by bar to get warm. Before Imant and Rina there stretched an endless vista of the monster city, the whale of a megapolis thrusting its enormous buildings up into the sky.

“I’ve received a letter from Hugo,” announced Rina, then she told Imant briefly what had happened to Robin and thrust the letter into his hands.

While Imant was reading the letter Rina took careful note of the expression on his face. Meanwhile the slowly turning wheel had managed to come almost full circle. A roar of children’s voices now hung in the air. From the next car suspended just above them someone threw down a flower, just for a joke. A flame-coloured nasturtium span down on to Rina’s lap—a fragile harbinger of autumn.

Imant put down the letter and said: “Thank you for showing faith in me, Rina. It may well be that it would have been better, if Robin had come to see you yesterday.”

“Am I too late? I can’t be too late, can I?”

“This morning we obtained our first encouraging results. We’re on the brink of discovering what Hugo managed to achieve.”

The two of them were silent for a moment, before Imant went on: “I had long suspected that Hugo had successfully split quarks, but I had no proof. Then the Huguenot’s whole pattern of behaviour... Forgive me!” broke off Imant with a sheepish smile.

“Hugo loved that nickname, and me too,” said Rina, turning a nasturtium in her fingers as she spoke.

So on that memorable night when the explosion happened, Hugo Lenz had, after all, succeeded in splitting quarks. For the first time in the history of mankind that step into the heart of the micro-world, hitherto unexplored territory, had been taken. The apparatus set up for the experiment had exploded and Hugo, as was clear from his letter, had been exposed to radiation. But it had not been ordinary gamma quantum radiation. The radiation sickness that it would cause was curable nowadays. Lenz guessed that it was neutrino radiation. No physical apparatus had yet been developed that could detect neutrinos. Enrico Fermi coined the name for these electrically neutral particles with zero rest mass that pierce the globe as easily as a ray of light penetrates transparent film.

The sensitive Lucinda with which Doctor Lenz had been in contact for many years, had a pretty thorough knowledge of Hugo—from mental capacity to neural cell structure. So, Lucinda was able to solve the unusual problem Lenz had fed her. By using variable prediction techniques she computed Lenz’s life span and determined the period he had left after the explosion and exposure to neutrino radiation. This, of course, was accurate only if Lenz was not treated and drifted with the current.

“I decided to sacrifice myself to save others. Believe me, Rina. I did not make this decision

on the spur of the moment, but only after I realized that the neutrino radiation emitted during the splitting of the quark was dangerous, and that it was impossible to prove it to the world. Who would believe me? Today, detecting neutrino radiation is like catching moonlight with your hands. Let us assume that I would still declare that quarks should not be split, at least until some means of protection against neutrino radiation is developed. What would munitions manufacturers say? They would love a new type of radiation to make their blasters a thousand times deadlier. I would be gagged, certified insane, and carted off to an asylum. What cards can I play in this game? Physicists might take years to learn to capture neutrinos.

“Yes, it was still early days to start splitting quarks. The society in which I live is not ready for it yet. Science has advanced too far. Our society has gone mad—it can destroy itself; men are hurrying to grab at anything they can lay their hands on, without thinking of the consequences. I don’t know how to change society—I’m scientist, not a politician. But even so—to just do nothing would be a crime at this stage...”

“I used to think that physics was the only thing on Earth that mattered to Lenz,” said Ardonis thoughtfully.

“You didn’t know him very well then, Imant. He was a man with an acute social conscience all his life,” Rina explained. “He could never talk calmly about the victims of Hiroshima or Japanese fishermen who had been exposed to ra-

dio-active fall-out... All the time though Hugo held that it was not the job of physicists to interfere in politics.”

Ardonis smoothed out the envelope with his hand and asked:

“Are you convinced, Rina, that Lenz took the right decision?”

“I can’t tell, but I am not in a position to condemn what he did either,” sighed Rina. “Why, oh why, didn’t he confide in me, though?”

“If he had other people might have found out by chance about his plan and then its impact would have been reduced to nothing. Anyway, how could you have possibly just sat there twiddling your thumbs, knowing that his life was burning down like a candle, a little further every day?”

“No, I couldn’t have done that,” whispered Rina. “What life I have left now, I want to devote to work for the cause for which Hugo died. No one had the right to just sit doing nothing and wait till we all go up in smoke.”

For a long time Rina found it impossible to come out with the question which had been plaguing her for some time: “Are you behind me in this work?”

“Very much so,” replied Ardonis in resolute tones.

“I knew that,” Rina said simply, by way of a reply. “But what can we do now?”

“We must make sure that no other physicist can reach the keys thrown out by Hugo Lenz.”

Rina looked over towards Ardonis and asked

all in a rush: "With no regrets?" She knew full well what that sentence had cost Ardonis, a man for whom up to now there had been nothing more important than his ambitions as a scientist.

"With regrets," echoed Imant, gripping hold of the rail so tightly that his fingers went white. He paused a moment and then added: "I can't get out of my mind Hugo's words that the goal of science is men's happiness. Otherwise science is pointless. Splitting quarks will release a terrible new force. It will place in man's hands a weapon, the like of which he has never known before. But how will he use such a weapon? If that issue makes no difference to a scientist, then he ceases to be a scientist and is no more than a mercenary hireling, who doesn't care whom he shoots at as long as he's paid for it."

"Listen a moment, Imant. If Hugo had come to you and said that he had split quarks but that the achievement should be kept secret ... that he had been exposed to that radiation but that doctors would be unable to find any trace of it ... that his experiments should be halted and their failure made public ... would you have gone along with him?"

Ardonis shook his head.

"Would you have believed Hugo?" Rina asked.

"No, I would probably have thought that Doctor Lenz was ill and not himself."

"Would you have carried on with the experiments?"

"With redoubled energy."

"I could have gone to Imant and told him of

the ridiculously simple idea for splitting quarks—the head-on collision of quark clouds—that had led up to the fateful result. But what would have happened when I told him about the neutrino radiation? The doctors maintain that I'm in good health. Ardonis is one of those people who will only believe machines, scientific instruments and objective fact. Ardonis is a fanatical devotee of science, of physics. Try and understand, Rina, I couldn't even refer him to Lucinda: there was no guarantee that I would not have been accused of juggling with the facts, of putting a special programme of my own devising into the computer."

"There was something else I hadn't told you, Rina," Ardonis announced. "I too have been sent a violet letter."

"You?! "

"Yes."

"A long time ago?"

"Not long before Lenz died."

"What did the letter demand in your case?"

"That I put a stop to the experiments, destroy all the findings made so far, and set a whole army of physicists off on the wrong course."

"And, what did you do about it...?"

"I'm not the scary kind," said Ardonis with a shrug of his shoulders.

"And how much time did ... he... grant you to live?" asked Rina hesitantly.

"Hugo turned out to be fairly accurate in his predictions," Ardonis said with a wry laugh, "he calculated that if I went on working at the same pace as before, I should have carried out

the all-important experiment by mid-August. That was what indeed happened. The experiment did not work—everything went wrong without Hugo there. I came within an inch of death.”

“You never said a word to me,” reproached Rina.

“You had enough trouble without me,” commented Ardonis, brushing off the reproach. “Besides, funny though it may sound, the violet came in useful, for once I’d been sent that letter they stopped suspecting me of blackmailing Hugo Lenz.”

“Hugo, Hugo,” sighed Rina softly. “I understand now that there was no other course of action he could possibly have taken.”

Imant turned the envelope over in his hands and said: “It took me a long time to realize where Lucinda’s printer had disappeared to. Now I realize that Hugo used it for typing all his letters and then destroyed it. He must have thrown it into the disintegrator.”

Rina took Hugo’s letter from him and put it away in her pocket.

“Here we are,” she said.

They stepped out of the cabin onto the damp asphalt which was rock-hard from the cold. From behind the automatic drink-dispenser they caught sight of a vigilant face.

Rina and Imant walked along the path that led to the exit. Above the green oasis of the small park loomed tall grey buildings like eerie giants. Close banks of cloud concealing hundreds of windows floated through the townscape, but overhead there still gleamed a small patch

of clear sky that even the highest building could not block out.

Imant thought to himself that Hugo Lenz had not died in vain. He had stemmed an avalanche of disaster at the cost of his own life, the story of which would one day be common knowledge. But now it was up to him, Ardonis, to take up the challenge and crusade on.

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